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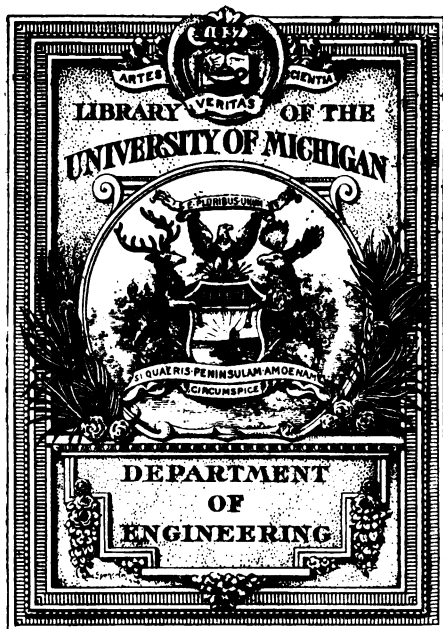
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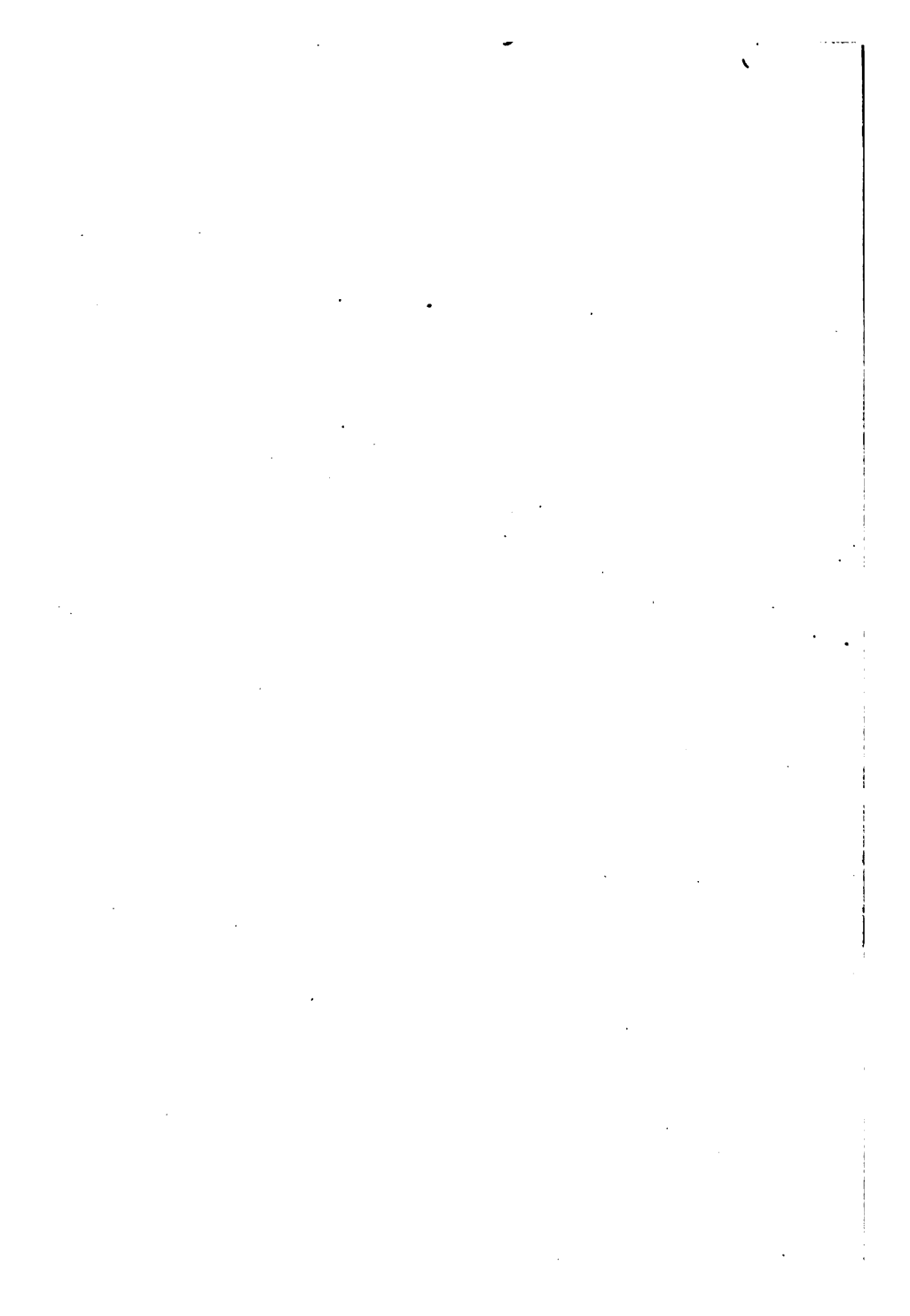
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RAILWAY STATION SERVICE

Benjamin Harrison BY
B. C. BURT, PH. D.

WITH THE "NORTHWESTERN LINE"

FIRST EDITION

FIRST THOUSAND

NEW YORK

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PREFACE

NOR designed as a manual explaining merely in a matter-of-fact way, either in complete detail or in outline, what things must be done at a railway station and how to do them, the present book, while stating with some fullness the leading features of railway station service as matters of prescribed routine, attempts to give also some insight into the general condition, spirit and principles of such service. It is a fact, familiar to every agent of experience, that the station man is depended upon by his superior officers not merely for a proper knowledge and application of his company's rules, but, in addition, for information and for well-advised opinions on a multitude of matters not covered by those rules; and the agent is well aware of the fact that his services are of value to his company very much in proportion as he is able to meet this additional demand. Furthermore, in recent years, legislation regarding railway matters has been such that the agent has been rendered in a measure independently responsible, so that it behooves him to become informed as to conditions under which he is placed, not by his company in the first instance, but by federal and state laws. And, again, the public whom the railway serves looks to the agent as its chief informant and adviser in matters relating to the business of shipping and of traveling.

In general, the tendency of circumstances — a tendency that is undoubtedly increasing in strength — is toward the necessity of the agent's being not merely a hired servant of his company but an all-round, intelligent, capable individual person. It is in accordance with, if not in consequence of, this tendency that schools have in recent years been established and are being established to fit men for the really intelligent understanding and performance of duties connected with railway service in general. The present work aims to contribute something towards meeting the demand involved in this tendency, so far as station service is concerned. The substance of the work was first made public in a short course of lectures delivered by invitation before the class in Railway Administration at Michigan University in the autumn of 1909; and it is the hope of the author that the work as here presented may be found of use to classes in railway administration in other institutions, as well as to railway agents in general, to shippers in some degree, and to the general student of railway matters. The matter of the book has been derived mostly through an experience of a dozen or more years on two leading lines of the West, no written work covering precisely the field of the book having fallen into the author's hands. For the faults almost inevitable in a first attempt of this sort the writer would ask a reasonable indulgence. Below is a short list of works which might profitably be consulted in connection with the reading of the book:

American Railway Transportation, by Prof. E. R. Johnson.

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Railway Working and Organization, edited by Prof.
E. R. Dewsnap.

Elements of Railway Economics, by Prof. W. M.
Acworth.

The Proper Handling of Freight Traffic, by R. C.
Richards.

Economics of Railway Operation, by M. L. Byers, C.E.

Railroads, their Origin and Problems, by C. F. Adams,
Jr.



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RAILWAY STATION SERVICE

CHAPTER I

THE STATION IN ITS GENERAL NATURE AND SIGNIFICANCE

Meaning of Term *Station* — Necessity of Railway Station — Its Importance under Varying Circumstances — Station as a Precondition of Railway and Integrant Organic Constituent of it.

ALTHOUGH a railway station is in a general way a sufficiently familiar object, it will not be out of place to offer here an informal definition of it, as an introduction to our discussion. A railway station is one of the essential factors of a railway system as a system of transportation, and may be defined, in very general terms, as one of the fixed or *stated* points at which railway transportation begins and ceases. The word *station*, in fact, means etymologically a standing, a state or place of rest or inactivity; and attention may well enough be directed here to this meaning as a distinct reminder that *mere* transportation, as a form of mere *motion* does not really exist; real transportation implies necessarily a standing or stopping as an organic correlative. Doubtless it is the habit of many persons to think of transportation as a going or a being carried somewhere, without remembering sufficiently that it involves also a starting and a stopping, consequently a

place or places of starting and stopping, i.e., the *station* in some form or other.

The *necessity* of the railway station will not be seriously disputed by any one. It seems impossible, or next to impossible, to conceive that a railway, as commonly understood, should be operated without fixed facilities for loading and unloading freight and for protecting or storing it while awaiting forwarding or delivery; facilities for caring for the comfort and convenience of persons awaiting the departure and arrival of trains and for the protection of baggage belonging to travelers. It is quite unlikely that railway managers would ever decide to abandon all stations in favor of a method of picking up and putting off passengers and freight at random en route, very much, say, as the street railways of the cities pick up and put off their passengers; the expense and inconvenience of such a method would doubtless speedily prove prohibitive of railway operation. It is altogether improbable that any of the marvelous human ingenuity of this age or any future age will be expended in discovering how traffic — freight and passengers — may be collected and distributed by trains while in motion, just, for example, as water is often taken by engines running at high speed. The *necessity* of the railway station may, then, be assumed, without further consideration.

But although this is true, there is room for the consideration of the importance of the station under varying circumstances and of stations collectively taken. If one studies the published train schedules of the railways, one sees at once that on many lines of road not nearly all

possible stops for trains are *actual* ones, or that not all trains stop at all stations. Many trains are run which do not stop at one-half or even one-third of the stations on their routes. On many lines of road only a few stations are stations at which all trains stop, i.e., are stations which have actual or full significance for all trains. To this extent it is certainly true that the station is not a *necessary* and *universal* correlative of transportation. This appears to be especially the case on the so-called trunk lines, while on branch or subordinate lines all trains as a rule stop at all, or nearly all, stations. Again, as one travels over the lines of the country one notes that numerous so-called stations are very insignificant in appearance, — situated at the merest hamlets, having the barest station facilities and surrounded by the fewest signs of habitation; and, on investigation,¹ one may learn that there is a very large number of stations at which the population is less than fifty persons. And if one takes the trouble to consult the Official Station Lists or the Tariffs of the railways, he soon discovers that there is on nearly every line — on some lines they are surprisingly numerous — a class of stations called “prepaid stations,” which are thought too unimportant to have an “agent.” in charge. Once more, it appears that stations are not infrequently abandoned and disappear from the “map” and the records of the railway, because they become too insignificant, fail really to “materialize,” as it were. Finally, on some roads, especially the “overland” roads of the

¹ See, for instance, the “folders” of the Union Pacific or the Missouri Pacific Railway.

West, there are very long stretches of rails on which no stations at all are to be found. All these things may naturally suggest that the station, instead of being entirely *essential* to transportation, is, to a certain extent, merely incidental.

But this suggestion must not be taken too seriously. There is no transportation which is not a movement *from* somewhere to somewhere, this "somewhere" being in each case a station. Traffic does not mysteriously spring up at any and all points indifferently and disappear in like manner, as it were into the air; it arises at, and because of, the station, and has its destination there. It is perhaps not unnatural to exaggerate in thought the relative importance of mere transportation, owing to the brilliancy and wonderfulness of the discoveries and inventions by which transportation as at present existing has been made possible. A train of cars — especially such trains as one sees flying over the great lines of the present day — is a ceaseless object of wonder and admiration merely to look at and the utility and convenience of it seem boundless, the station, on the contrary, appearing as a mere subordinate condition. But the station cannot and must not be regarded merely in this light. It is not true that stations are arbitrarily established merely according to the exigencies of transportation requirements. They are not merely mechanical *resultants*, but also organic *preconditions*. The stimuli or inducements to locating and building railroads are largely given beforehand in the existence, in possibility if not in actuality, of certain economic centers, economic stations we might style them, at which

traffic must originate and to which it must be destined. These centers, being already starting and stopping points for other kinds of transportation, very naturally become such for railway transportation. The station makes transportation quite as much as transportation the station. Granting that numerous stations have come into existence by the fiat of railway managers seeking to expand their properties or even to "develop the country" in which their properties extend, one may still assert that, but for the prior existence of certain economic centers or nuclei, transportation companies themselves would hardly spring into existence, and further, that the stations arbitrarily established by the companies in time come to react upon the companies and help to make them what they eventually are. It is apparently coming to be more and more a maxim of railway managers that the development of railways must be regarded as depending upon that of their stations, *local* as well as terminal or central stations, this being the only way of fully allying railway development with that of the "country," or the environment on which the railway depends. It scarcely needs to be stated that the station is the chief instrumentality by which the company is brought into contact with its productive environment, whether this be regarded as to the persons or the property which it includes. The station is the organ through which are rendered effective and manifest the functions constituting the essence of transportation and through which the transportation company derives the means of its sustenance and growth. This being the case, the station agent, it may here be said, is not compelled to

regard himself as a mere tool of authority emanating from the company in a purely arbitrary manner but as the organic representative of the company in its dependence upon its environment and also, as well, of the environment in its relation to the company. The station, we conclude, is an integrant organic constituent of the railway transportation system as such. Stations in their totality and connection are in an important sense the generative or productive nuclei of the system and constitute a main portion of its substance. This means that for the full consideration of the station it is necessary to examine, in a general way at least, the system as such; and this we shall now undertake to do.

CHAPTER II

THE STATION AND THE RAILWAY SYSTEM AS SUCH

Definition of a Railway System — Map of System, Official List of Stations, etc. — Interrelated Services performed on Different Parts of the System; the Announcements of these, Folders and other Forms of Railway "Literature" — Railway Organization and Functions — Different Meanings of the Term *System* as applied to Railways — Kinds of Railway Systems — Names of Systems: Three Kinds — Official Railway Guide — The Classification of Stations — System as a Huge Cluster of Stations.

A RAILWAY system may for the present purpose be defined or described as a system having as its object the transportation, for stated charges, of persons and property on land (or, on bridges, over insignificant bodies of water) by means of track or tracks consisting of rails, together with certain mechanico-dynamic appliances, operated by men, an indispensable auxiliary being telegraphic service. This is of course not the ordinary dictionary definition of a railway, which the rather concerns itself merely with the primary, physical aspect of the railway. Our definition is one expressly framed to indicate certain departments of activity or certain functions which are involved in railway maintenance and operation. In our definition certain necessary conditions are implied, such as, that a railway must possess a certain amount of land, in a certain territory, a track or tracks extending upon it, equipment running on the track or tracks; things carried by the equipment; men

maintaining the track and men operating the equipment; charges for services performed; men whose duty it is to fix rates and charges, others whose duty it is to collect and account for charges, etc.

Now it cannot of course be expected that a treatise having the object and scope of the present one should attempt to deal exhaustively with all the conditions involved in the existence of a railway system. But to one who is at all familiar with the facts in the case there can be little doubt that much of the inefficiency and error existing in the management of railway stations is attributable to the lack of knowledge, among station men, of the railway system as such and the relation of the station to it. A general statement of matters relating to these points is therefore here in place. The discussion seems naturally to resolve itself into three parts, indicated as follows: (1) What constitutes a railway system, (2) the kinds of systems, (3) the classes of stations comprised in the system as such.

Under the first heading we may consider first what may be called the "map" of the system. A railway system is, in the first instance, a line of road, either simple or single, or else composite, i.e., made up of two or more lines of road of which one or more are or may be *main* lines, the remainder *branches*. Along the line are various stations some of which are designated as terminal, others intermediate, some are junction or transfer stations where different parts of the system come together or where the system is connected with other systems; while other stations, the great majority, are purely local. Since, as we have seen, the business of

the railway is a business of stations with stations, it is self-evident that a knowledge of the character and location of stations is of first importance to the station man. This is particularly true as regards terminal and transfer stations. The line of road derives to a certain extent a specific character from the mere surface of the country over which it extends; and of this no station man can afford to be entirely ignorant. It is further specified by the character of the territory adjacent to it, which, together with it, goes to make up the "map" of the road. There are geographical, climatic, agricultural, mineralogical, industrial, numerous physical and economic conditions upon the recognition of which by *all* concerned in the operation of the road the welfare of the system depends. The map of the road is, very evidently, such a thing that no one portion of it can be fully understood in its possibilities or fully developed out of relation to the rest. The knowledge of the duties of one station is more or less involved with that of the operations possible or necessary at other stations; the prosperity of each is bound up with that of all. The railway system is truly an organic entity. And it will do no harm to emphasize the fact here. Experience constantly demonstrates as a fact that a very prolific source of error and weakness in railway business is the neglect of this truth. Even in the mere matter of "looking at" or studying "the map," in the most superficial sense of the term, neglect and failure are altogether too common. The ordinary station employee is very often prone to be satisfied with merely *getting off his hands* a shipment that must be forwarded, without taking the

trouble to inform himself by what route or under what conditions in general the shipment must be moved. It is even true that some railway managers neglect to supply their stations with fairly good maps of their systems, with results in transaction of business which are nothing less than scandalous. The maps sometimes issued are, one regrets to be compelled to say, merely flamboyant caricatures, of questionable value considered even merely as advertising schemes. It would seem that every railway company should issue, for the use at least of its working force, a correct and valuable map showing the location and direction of its various lines and the positions of the stations thereon and also indicating to a certain extent the natural and artificial resources of the territory through which the road extends. There are indeed many good railway maps meeting the first named of these two requirements, but few apparently that meet the second, although the latter is often met in other ways. Were such fairly complete maps regularly issued to all who would be concerned in them, station agents and others would almost be compelled to be much better informed than they are on many important matters and would in consequence discharge their duties much more efficiently many times. Doubtless in prosperous times, when roads extend their lines, maps would be more or less outgrown, but they might be very readily corrected or supplemented by the application of a little skill and pains in drawing with ordinary pen and ink. In immediate connection with the "map" of the system in the more literal sense of the term should be studied the Official List of Stations, Officers,

Agents, etc. A good "official list"¹ comprises many items of information of the utmost practical value, such as the following:

1. Tables showing the organization of the various departments of the system, together with the names of officials in charge.

2. Tables showing in order, according to Grand Division, Division and Line (main or branch), the names of the stations together with their assigned numbers or other designations, their kind (ticket, freight, telegraph), their telegraphic symbols and the names of agents; also the mileage of each main line district and of each branch, together with the distance of each station from a certain assumed basing point.

3. Table showing the location, the length in feet, the capacity in tons, etc., of track scales along the line of the road

4. Table showing the location and equipment of the stockyards along the line according to its various divisions.

5. Table showing the locations of common points with other lines and the names of other roads with which the system has track connections, as well also as of roads at common points with which the system has *no* track connections.

6. Table of joint agencies in which the system is interested, showing the names of the roads jointly concerned, the name of the agent in charge and the name of the road having the appointing authority.

¹ For an example of such a list see that issued by the Santa Fe system.

7. Tables showing the assignments to various officials of freight and passenger territories.

8. Table showing the territories to which are assigned the various traveling auditors.

9. An alphabetical list of stations, together with the names of the station agents.

Here, it will easily be seen, is a mass of information of the very first importance. By the study of the list the agent and his assistants may provide themselves with a fund of knowledge furnishing a solid basis for much of their daily work, not only so far as the "map" of the system is concerned, but also as regards the operations constantly in progress over the line. Besides the official list issued by each separate line or system, there must also be mentioned here and recommended for consideration a general official list of stations on all roads west of the Mississippi River, with, also, roads in Illinois and Wisconsin. This list distinguishes very clearly *established* stations, *abandoned* stations, stations with *changed names*, *open* and *prepay* stations, stations changed from *open* to *prepay* or vice versa, stations at which are no facilities for unloading carload freight, and stations at which only carload freight is handled.

Having spoken, in the first place, of the "map" of the system, we may, secondly, speak of the operations or services performed and the advantages to be found along the line of the road pictured by the map. In the performance of the services, naturally, others besides the station employees are concerned; but the latter are deeply concerned in them inasmuch as the sale of the services to the public desiring them is chiefly in the hands of the

station men. The agent and his assistants must keep the public fully and correctly advised as to the commodity, as it were, which the transportation company has to offer — the commodity transportation itself. Transportation occurs under various conditions over the parts of the system, and is necessarily conducted on one part of the system with reference to itself on another part of the system. There is, in other words, a widely extended system of operations or services in which the station is concerned and with which the agent and his assistants have to familiarize themselves, — the movements of trains, their times of arrival and departure at numerous points, their connections with one another, points of transfer, kinds of services, charges for the same, etc. Upon these and other things related to them it is scarcely necessary to dwell here; their significance is sufficiently obvious for our present purpose. We may refer to a few of the general sources of information regarding them. These are documents of various sorts, of which we notice, first, the schedules of trains and train service issued by the system for the use (*a*) of the traveling public — the “folders” so called — and (*b*) of employees only. The railway “folder” is a document of no mean significance, and will, in its best forms, repay a somewhat careful study. Evidently much pains has to be bestowed upon its preparation, and it contains, one may venture to say, much more than the great majority of persons using it, whether travelers or railway employees, ever come to realize. Without offering any apology for so doing, we may make a brief analysis of the contents of a folder of standard type, a “complete” or “system”

folder as distinguished from an "abridged" or "local" folder. There are in existence many examples of such standard types, and it will not be difficult for any one so inclined to substantiate our statements for himself. In such a standard "folder" the traveler or the ticket seller will, if he looks carefully, generally find most, if not all, of the following items of information:

1. A statement of the general organization of railway officials.
2. A list of leading passenger agencies, domestic and foreign.
3. An index of various lines composing the system and of other important matters.
4. An alphabetical list of stations, together with paginal references for locating them in their respective train tables.
5. A table of general reference marks, with an explanation of the significance of the same.
6. Condensed tables of through train service and through car service between leading points on the system and between points on the home system and points on foreign systems.
7. Full and elaborate tables of trains and train service on main lines and branches; local and suburban, as well as through, trains (the number of these tables may rise considerably above 100).
8. Tables of dining-car service.
9. Tables of parlor-car, Pullman, sleeping-car, tourist sleeping-car rates.
10. A map of the system, with a table exhibiting the mileage of the system.

11. A list of points common with other lines, where connections are made with them.

12. Pages of general information for passengers.

13. Condensed schedules of the service of connecting railway or steamship lines.

14. Pages advertising miscellaneous matters of interest relating to the system.

From some, though not from the majority, of the standard "folders," one may derive information as to the population of the individual stations along the line of road. This, however, seems to be an item of information belonging rather to another class of folders of which we have to speak.

Of the "abridged" or "local" folder it is unnecessary to speak in detail.

These two classes of tables are very popular railway documents, and it behooves the agent to have always on hand a liberal supply of them in the proportion of one-third "complete" folders to two-thirds "abridged" or "local" folders. The former should, as a rule, be kept for distribution to the long-journey travelers, the latter to the short-journey. Both classes are especially suited to the wants of the traveling public and of the agent in his dealings with that.

The employees' time-table, on the contrary, is, as the name indicates, "for the use of employees only." And in truth this time-table is of primary importance to those directly engaged or concerned in the actual operation of trains, rather than to the station man. Nevertheless, the agent is expected and needs to have in actual possession a copy of each current "employees'

time-table" and to be governed by it as far as it applies to his duties. In such time-tables the agent finds, besides exact train schedules, a classification of trains into first, second, third, etc., and a designation of trains belonging to each class; tables of the telegraphic office "calls," of station numbers; descriptions of train service (showing speed of trains, points at which trains stop only on signal, points between which passengers are carried on freight trains proper, points at which trains stop for meals or for luncheon, etc.); designations of classes of stations (telegraph, telephone, day, night, coal, water, etc.); tables of office hours along the line, of tonnage-rating of freight-trains (for the guidance of yard men as well as of train men); tables of the average weight of empty cars; rules and instructions regarding the movement of freight over the various portions of the line, etc.; all such items of information being of the greatest importance to the agent and his men in the complete performance of their duties.

Next in order to the folders and the employees' time-tables may be mentioned tables which along with somewhat of the information furnished by those give information in regard to the towns and to the adjacent country along the line — various commercial or economic advantages to which the line of road provides means of access.

Then may follow folders or pamphlets relating *solely* to such advantages, addressed to land-seekers, home-seekers, pleasure-seekers, health-seekers, prospective attendants at conventions, political, religious, commercial, scientific, educational, upon whom the agent may need to wait, soliciting their patronage.

Other sorts of railway "literature," so called, there are, almost too numerous to mention, all having some bearing upon a working knowledge and appreciation of the system as such.

Of railway equipment and of railway charges for services rendered, both of which are referred to in our definition of the system as such, we shall not stop to speak here, but will, more suitably, speak later.

We now pass to the general organization of the persons who have the management of the system and its affairs. With this subject we may deal in some detail by way of preparation for the discussion of the functions of the station as an integrant organic part of the system, in which must, to a certain extent, be reflected the nature of the system as such. One looking into the matter of the organization of the men and functions of the system at once sees clearly certain grand distinctions. Here it is very convenient to turn to the public announcements of organization issued by the existing railway companies contained in time-tables and particularly in the well-known Official Railway Guide. It will be sufficient for our purpose to cite merely a few of these. We are not concerned with the organizations on their own account and taken together as a collection or totality but with them as related to the station and vice versa. The published organization of the Grand Trunk Railway is substantially as follows: (1) Executive Department: president, vice-presidents, secretary. (2) Legal Department: general solicitor, solicitors, and attorneys. (3) Financial and Accounting Departments: comptroller, treasurer, auditors, accountants. (4) Transportation,

Maintenance and Construction Department: fourth vice-president, chief engineer, superintendent of motive power, superintendents of car department and car service, superintendent of telegraph, and various other superintendents. (5) Purchasing Department: purchasing agent, stationery agent, fuel and tie agent. (6) Traffic Department: freight traffic manager, passenger traffic manager, general freight agent, general passenger agent and their subordinates. (7) Division Freight, Commercial and General Agents. (8) Passenger and Traveling Agents. The organization of the Wabash Railway is as follows: (1) Executive Department: chairman of the board of directors, president and vice-presidents, secretary. (2) Legal Department: third vice-president and general counsel, general solicitor, general attorney, assistant attorneys. (3) Treasury and Accounting Department: fourth vice-president, treasurer, auditors, accountants. (4) Operating Department: general manager, general superintendent of transportation, superintendent of locomotive and car department, chief engineer, superintendent of telegraph, superintendent of terminals, paymaster, purchasing agent, division superintendents. (5) Traffic Department: general traffic manager, assistant general traffic manager, general freight agent, general passenger agent and their assistants. (6) General and Traveling Agents, passenger and freight. To take one more example, the organization of the New York Central Lines, including nearly twenty different systems, each of considerable magnitude and importance in itself, is in outline as follows: (1) Executive Department: chairman of the board of directors, president,

vice-presidents, secretary. (2) Financial Department: vice-president, treasurer, assistant treasurers, cashier. (3) Operating Department: vice-president and general manager, assistant general managers, chief engineer, general superintendents, superintendents of motive power, rolling stock, telegraph, terminals, dining service, division superintendents, purchasing agent. (4) Accounting Department: vice-president, auditors, freight claim agent. (5) Construction Department: chief engineer of electric traction, electrical engineer, signal engineer, engineer of structures, etc. (6) Legal Department: vice-president, general counsel, general attorney and his assistants. (7) Land and Tax Department: general land and tax agent. (8) Freight Traffic Department: vice-president, freight traffic manager, assistant freight traffic manager, general freight agent, assistant general freight agents, division freight agents, coal traffic manager, general live-stock agent, industrial agent, commercial agents, traveling freight agents. (9) Passenger Traffic Department: vice-president, general passenger agent, assistant general passenger agents, district passenger agents, general agents of passenger department, traveling passenger agents, general baggage agent. (10) General Advertising Department: general manager of advertising department. On other systems there are still other departments of organization than those named above, as, a relief department, insurance department, steamship department, statistical department, industrial department, and perhaps some others. And there are differences of organization lying deeper than that in mere departments, e.g., the difference of "departmental"

organization on the one hand and of "divisional" organization on the other. The discussion of all these differences and their grounds would doubtless furnish abundant matter for interesting reflection; but it would carry us far beyond the scope of our subject and will not be undertaken by us. We are the rather concerned with the general identities of the systems, which, as a matter of fact, are very obvious, in large part, and exist even when not entirely obvious. Practically there are six or seven "departments" which are common to nearly all organizations and in which we are here especially interested, about as follows: operating department, traffic department, treasury department, accounting department, purchasing or supply department, legal department. To these should be added an industrial department and a claim department in case that is to be considered independently of the accounting department or of the operating department or both. In regard to the claim department usage seems to vary considerably and the agent is sometimes at a loss as to what authority claims of a given particular character should be presented to. The conflict that exists in usages may eventually result in the complete differentiation of the claim department from other departments as an independent entity. The above-named eight or nine departments of organization are, it will be found, pretty distinctly represented in the regular, ordinary work of the station. Others are not so distinctly represented. And indeed it could hardly be expected that the central organization of the system would merely be duplicated, in miniature as it were, in the work of the station; difference of con-

ditions prevents that. The relation of the *central* organization and the *circumferential* — if we may apply this adjective to the station — is one of organic, not literal, static, identity. It is very evident, too, that while the different departments of organization, broadly speaking, exist implicitly in the organization of the station, they are in a manner disguised by the fact that it is not practicable to have at the small station a division of station forces, or the labor employed, according to the differences of the departments of the central organization. But of course this does not in the least alter the fact, already frequently referred to, that the station is the organic expression of the system in its relation to its environment and vice versa.

We may conclude our discussion of the nature of a railway system by an observation or two on some meanings of the term *system*. The term *system*, which appears to be generally considered as peculiarly applicable to the railroad, is used in two different senses, according to one of which a system is a whole of which every part is submerged, as it were, and rigidly held in the whole as a mere accident of it, i.e., is practically annihilated as a unit. This is what may be termed the mechanical notion of the system. It corresponds to a certain type or disposition of mind or will which may perhaps be characterized as military. According to this notion, the station is, virtually, a sort of military post at which is located a force commissioned to make violent conquest of a certain material territory, purely in the interest of a powerful and greedy corporation, the force conceiving itself to be under a quasi-military

régime. This notion is perhaps a not unnatural one in the early stages of railway development when mechanical problems seem paramount in importance. But as economic questions increase in importance the term *system* gets an interpretation and application which may be termed organic, it being understood to imply that the station is an instrumentality for the promotion of mutual interest, i.e. between the system and its environment, and is a part upon which the whole acknowledges its dependence in a degree. It is this interpretation and application of the term which to-day the more correctly represents the real situation of things. A certain military rigidity there undoubtedly is and must be in railway operation, but, properly speaking, this should not be considered as an end in itself but as a means, rather. It is gradually coming to be acknowledged on all sides that the true underlying principle and spirit of railway operation are primarily organic rather than mechanical, in that the agent must represent and protect the interests of the system rather as an economic than as a military or quasi-military entity. As a sort of public utility railway systems, more than they formerly did, consult public wish and convenience, and listen to the voice of public sentiment as conveyed to them through their agents, thereby being led to treat their agents less as mere tools and more as coadjutors or aids.

Having discussed the system as such, we may briefly discuss the varieties or kinds of systems. This we are rather compelled to do because there exists no single system by itself; there are, instead, systems in relation with one another. These systems differ among them-

selves, and, further, tend to merge into larger wholes, systems of systems. Railroads arise out of different conditions, have different interests and objects, even when they may have in common the one aim of conducting a general transportation business. There are roads having primarily limited objects, — coal roads, timber roads, ore or mineral roads. There are scenic routes, health- and pleasure-resort lines. There are mere interchange roads, or switching lines. Again, there are roads which run trains only at particular seasons of the year; roads operating trains not regularly on published schedules, but only irregularly, on train orders, according to the varying demands of trade. Some roads are comparatively simple in their constitution and organization, others remarkably complex. An example of the latter kind is the system, already referred to, of the New York Central Lines, which is in reality a system of systems. A station belonging to such a system is part and parcel of an extremely elaborate organization, and the employees at such a station have constantly before them no small task in keeping their bearings, as it were, in relation to the various parts of the great system. Inadequate *general* ideas, at least, as to its organization, its divisions, its junction points, its managing officials, easily lead to mischievous results. There are many such systems, though smaller, the country over, and there is little need to argue here at length the importance of the knowledge of general railway organization to the station agent and his assistants. Freight has to be billed, passengers have to be ticketed *through*, from stations on one system to stations on others; and the

knowledge required for such work cannot be a merely local or provincial one. An agent even at some comparatively small station, some junction-point station, may have to familiarize himself with a territory twenty thousand miles, more or less, in extent. But again, there are systems in a still larger sense (though they do not so much concern the station man), systems known, not by the names of leading lines, but by the names of controlling financiers, as the Gould system, the Hill system, the Harriman system, the Vanderbilt system. These systems, though they are very interesting to the general student of railway matters, we are not here called upon to discuss. They require, however, to be mentioned in illustration of the various scopes of meaning which the term *system* may have as applied to railways.

In connection with the discussion of systems there is opportunity and, indeed, temptation, to enter into a brief discussion of the *names* of systems in general. There cannot be the slightest doubt that the name of a system is in closest organic identity with the system itself; and it often appears true in this matter that the "rose" takes its character largely from its name instead of being quite independent of it. Some names appear to appeal to the popular ear with magic effect. There are three classes of names, possessed, it is true, not by all alike but by many systems: first, a formal legal name — a full baptismal name, as it were, as e.g. The Atchison, Topeka and Santa Fe Railway, The New York Central and Hudson River Railroad, The Missouri, Kansas and Texas Railway, etc.; secondly, an abridged

name, somewhat uncouth in pronunciation but indispensable nevertheless, consisting of the initial letters of the words forming the "baptismal" name, *e.g.* A. T. & S. F. Ry., N. Y. C. & H. R. R.R., M. K. & T. Ry.; thirdly, a popular or trade name, which from one point of view is merely a convenient nickname and from another is a sort of *slogan* used by a line in its rivalry with other lines. It is often hardly less valuable and indispensable than the other names. The managers of the various lines show by their advertisements that they set a very high value upon such names. Examples of this third class of railway name are "Santa Fe," "New York Central," the "Katy" (M. K. & T.). Such names are of course very common — arise spontaneously almost, according to fancy. All the classes of names have their demonstrable use. As regards the legal name this is obvious enough. But this name is altogether too cumbersome for daily use in the reports and correspondence of railway officials and employees, and here its place is taken by the abridged name (when precision is necessary) or by the more popular name. The abridged name appears on all railway equipment, which it serves to identify. Every agent knows, or should know, the necessity of it and the necessity of its being correctly stated. Upon this point there will be occasion to speak later. The popular name of a given road very often captivates the public ear to such a degree as to exclude from attention the names of other roads having no suitable or euphonious popular name. This means of course that the system with the eloquent name is quite apt to secure public favor in business that is competitive

in its nature.¹ Along with railway names we may barely mention railway trade-marks appearing in railway advertisements and on railway equipment.

Before leaving the subject of railway systems in their variety and combination, we may, to stimulate, if possible, the study of them, call attention to the chief source, generally accessible, of knowledge regarding them, viz. the Official Railway Guide, giving a brief analysis of its contents. The Guide is issued monthly, under the auspices of the American Association of General Passenger and Ticket Agents. It contains a general index of railroad and steamship lines, sixteen to eighteen hundred in number; some pages of general railway information of considerable interest and value; an

¹ The student or reader might be pleased to see here a longer list than the one above given of popular or trade names of railways: The *Nickel Plate* = the New York, Chicago and St. Louis Ry.; the *Big Four* = the Cleveland, Cincinnati, Chicago & St. Louis Ry.; the *Clover Leaf Route* = the Toledo, St. Louis & Southwestern R.R.; the *Maple Leaf Rte.* = the Chicago Great Western Ry.; the *Cotton Belt Route* = the St. Louis & Southwestern Ry. and the St. Louis & Southwestern Ry. of Texas, taken as one line; the *Lookout Mountain Rte.* = the Nashville, Chattanooga & St. Louis Ry.; the *Iron Mountain Rte.* = the St. Louis, Iron Mountain & Southern Ry.; the *Q Road* (not shown in Guide) = the Chicago, Burlington & Quincy Ry.; the *Overland Route* = the Union Pacific R.R.; the *Sunset Route* = the Southern Pacific Lines; the *Queen and Crescent Route* = several lines, of which the Cincinnati, New Orleans & Texas Pacific Ry. is principal; the *Monon Route* = the Cincinnati, Hamilton & Dayton and the Cincinnati, Indianapolis & Louisville Rys.; the *Choctaw Route* = a particular district, lying in Arkansas and Oklahoma, of the *Rock Island* system; the *Burlington*, the *Northwestern*, the *Milwaukee*, the *Omaha*, the *Soo Line*, the *Niagara Falls Rte.*, *Salt Lake Route*, the *Vandalia Route*, not to mention numerous others. The subject of railway names (of all descriptions) offers a rather fascinating field for study.

official list of passenger departments; a list of railway associations and their officers; an official list of joint passenger tariffs and names of their compilers; a list of numbers assigned to transportation lines; a general railway map of North America; a table exhibiting the standard-time sections, with the points of division between them; a list of the recognized car-service associations; *time-tables and lists of officers of railroads and steamboat lines*, — which, naturally, constitute the great bulk of the volume; a list of old and new names of railroads; a list of new and old names of roads, showing changes since 1900; a list of old and new names of stations; a list of new and old names of stations; an index of points reached by water routes; *an index of railway stations* on lines in the United States, Canada and Mexico. Of chief importance to the ordinary station man are, naturally, the time-tables and lists of officers of the railroads and the index of railway stations. These, it is true, he generally learns to use after a fashion, though he comes far from getting out of them as much instruction as he might get. Other portions of the Guide he is pretty apt to ignore entirely. The work contains of course a vast mass of railway information, and is calculated to impress any one using it faithfully with the immensity of the great railway net of the country. The time-tables of some of the individual systems are astonishing in their extent, those of the Pennsylvania Lines, east and west, for instance, covering more than eighty-five pages, those of the New York Central lines nearly eighty pages, those of the Southern Railway upwards of twenty pages, those of the Santa Fe system

a dozen or more pages, those of the Chicago, Milwaukee and St. Paul Railway nearly fifteen pages, etc. The mileage shown of many systems, ranging on not a few lines from five to fifteen thousand, is, too, something astounding; also the number of roads which have been absorbed in the making of the systems and the number of trains which daily operate over their rails. In the time-tables of the different lines one may find very much the same information as one finds in the "folders" which we have already described; in the index of railway stations one finds not only a complete list of stations together with references to the lines to which they belong but also, which is a thing of much importance, information as to the relative situations of the passenger depots of different lines in the numerous common points. But not to occupy too much space with this topic, we may close our treatment of the sources of information regarding railway lines by merely mentioning another very elaborate and exhaustive guide, known as Bullinger's Shippers' Guide.¹

We pass now to the third leading division of our general topic of the Station and the Railway System, namely, the classification of stations. In this matter the station man must naturally feel especial interest; but it can hardly be said that his curiosity in regard to it can be fully satisfied. Stations differ very widely and

¹ In this connection we cannot forbear suggesting that a valuable addition to the Official Railway Guide might be made in the shape of a separate list of the names of lines whose *abridged* titles would be identical; e.g., Bangor and Aroostook, Birmingham and Atlantic, Boston and Albany.

a satisfactory convenient classification of them is not easily provided. Regarding stations the following distinctions are possible. 1. Line or home stations as opposed to foreign agencies, or commercial agencies of the line situated *off* the line, in or at prominent commercial centers, the managers of such agencies being styled *general agents*. 2. Stations transacting a general railway business as opposed to stations assigned to some particular branch of the business, as mere passenger stations, mere freight stations, mere telegraph, mere fuel, mere switching stations, etc. 3. Stations as differenced from one another by peculiarities of industrial or economic conditions. 4. Terminal as opposed to intermediate, junction or common point stations as opposed to isolate or noncompetitive stations. 5. Stations comparatively simple and small in their activities as distinguished from such as are medium sized or large and complex in respect to these. Stations are important to one central department of administration by virtue of one attribute, say amount of tonnage, to another by virtue of another, as earnings, to another by virtue, rather, of the relation of tonnage to earnings. Stations may be *graded* by reference to either of the attributes, the number of grades being as indefinite as the differences of mathematical quantity. To be satisfactorily, i.e. usefully and conveniently, *classified*, their recognized differences should be reduced to a comparatively few. In the absence (so far as the writer is aware) of any existing comprehensive useful and convenient classification of stations in their concrete character, the following is offered as at least a tentative one. The classification

will embrace three leading divisions with subdivisions under each. First may be taken together and by themselves stations of a strictly local character, very limited as to the amount of business done by them, very simple in their operations. Secondly, stations doing a larger amount of business, of a more or less competitive nature and having considerable complexity in their operations and yet managed, as a rule, by a single head known as the "agent," may be grouped together into a separate class. Thirdly, there may be formed a class of stations at which, owing to the very large amount of business to be transacted, to the strongly competitive character of the business and to the great variety and complexity of operations necessary, there is a very marked differentiation of functions and of labor and no *single* head, it may be, of all departments of operation. As convenient designations we may style these three classes of stations "small," "medium-sized" and "large" stations respectively. The significance of these designations will become clearer as we proceed. We may also use the designations "C," "B," "A" for each of the three classes respectively. Beginning with "small," or class "C," stations, we will seek the subdivisions in each class. First, doubtless, must be the very small station at which no agent is to be found, consisting, it may be, of a mere platform and a side track or else mere spur, in addition to the main track. Some railway tariffs, indeed, designate as stations points at which there is no visible structure of any sort, except possibly a mere post, to mark them. There may be, however, at stations of what we shall regard as the lowest class, Class C-3, a

building of some sort for the temporary protection of freight and perhaps passengers also. But, as already stated, there is no agent, and no provision, therefore, is made for the regular handling of charges and accounts at such stations, such matters being taken care of by agents at the nearest regular station. For this reason they are *expressly designated* and *distinguished* as *prepay stations* and have on that account a place and importance all their own. In a way they are of much more consequence to agents at other stations than are "larger" stations, since to them *all* shipments must be billed "prepaid," and *no* shipments may be billed "*shipper's order*." Another subdivision of class C-3 stations is constituted by stations which have an agent in charge and which also are of a terminal character in that they are actually or in a sense at the end of the line and have as a part of their complete facilities a turntable or even a roundhouse, a roundhouse man and car inspector, i.e. some differentiation or development in a mechanical regard. At such points a telegrapher is required and there is an extra amount of telegraph service necessary. The amount of business done is apt to be a little larger than at stations of a lower class. Intermediate between this class — which we shall have to designate as Class C-1 — and the lowest class already discussed is the ordinary typical local, noncompetitive "small" station, of class C-2. This station has an agent, but not *necessarily* a telegrapher, telephone service of very limited sort taking the place, it may be, of the telegraph here. The amount of business done at such a station *may* be quite considerable; and in fact the amount of business done at "pre-

pay" stations is often somewhat surprising. In case the amount of business warrants, Class C-2 stations would require and have an assistant for the agent. As to number, Class C stations take precedence of all other classes; and as to the total amount of business done they are in their sum very strong though weak individually. The "small" station is by no means something that might be obliterated, so to say, from the railway map with advantage to the railway itself.

Passing to stations of Class B, we note first the smallest sized of the competitive stations which are intermediate merely, Class B-3 stations. At these there may or may not be transfer tracks connecting different roads. A new class of business and a new class of records and accounts, namely interline, here appear. The agent has dealings with agents of other lines and he is compelled, in order to hold his company's share of the business of his town, to keep in close touch with the public upon which he depends for patronage. Also he is expected to keep in close touch with the managing officials of his line, who are especially watchful of what takes place as regards competitive business in general. The amount of business done may or may not be so great as to make it necessary that the agent be provided with one or more assistants, an "operator" or a "helper" or both. If his station be on a "main" line, there will, according to existing laws, be three "operators," whether the amount of business really demands this or not. Class B-3 stations are apt, as compared with lower classes of stations, to exhibit some track increase or development, on account of the additional transfer track required and on account

of a larger amount of business due to a larger size of the place at which the station is located. Here may perhaps be found, besides a main track and a side track or "passing" track, also a transfer track and a track or two serving one or more industrial concerns. What we shall term stations of Class B-2 have a various character; besides being competitive in rank, they are either terminal or joint (common to two roads using the same facilities) or both together, though still under the management of a single person, the "agent." In any case there are an increase and new differentiation of duties, even though external arrangements and the station force may not be increased materially. As to the latter things, much depends upon the mere *amount* of business. At such stations it is apt to be the case that the number and manifoldness of duties are somewhat out of proportion to the "amount of business" in the ordinary sense of the term and the showing made as to tonnage and earnings is not such as to secure for the station a proper amount of help for the full performance of duties. In fact this class of station is of an unstable nature, a scene and center of conflicting interests and operations. An increase and differentiation are apt to occur in the station force to the extent of the addition of a cashier and a clerk or two to the force found in stations belonging to Class B-3. This certainly is not superfluous if a station happens to be not merely competitive but also a transfer, a terminal and a joint station also. At such a station there are, in addition to what is found at the ordinary local station, Class C-2, extra telegraphing, fuel accounts, interline records and reports, increased

correspondence as regards competitive matters, an increased number of tracers, increased labor in soliciting public patronage, and other matters which we will not stop to specify. Passing to stations of Class B-1, the differentiating feature is found in the fact that the station, as it were, begins to disintegrate in *reality* as it *threatened* to do in Class B-2; that is to say, the agency divides, a separate "ticket agent" is introduced and the official termed "the agent" is merely the *freight* agent of the station, upon whom, however, the greater weight of responsibility is made to rest. At such a station there is a relieved situation and matters may be carried on more systematically and smoothly than at stations of Class B-2, although, of course, the simplification introduced by the separation of the passenger entirely from the freight work may be in part offset by an increased *amount* of work to be performed. But there is apt to be a better differentiation of forces according to functions to be performed and in so far more satisfactory performance of work.

Without dwelling longer on this class, we pass to Class A stations in general, of which we shall not undertake to give so full analysis relatively as of the preceding, for reasons which will appear hereafter. Stations of this class arise, as we have seen, where on account of the great amount and variety of business an extreme differentiation of departments of works arises, especially a segregation of the traffic function with offices and agents of its own. At Class A-3 stations a "general agent" is in charge of traffic, in addition to the ordinary agent, now known as "local" agent and having charge of both

freight and ticket offices, and exercising functions more especially "operative" than did former local agents. Characteristic of this class of station are also somewhat enlarged terminal facilities, larger freight house, greater number of house tracks, industrial tracks, switching tracks, team tracks, storage tracks, transfer tracks than heretofore, a larger and more specialized office force and warehouse force. A "chief clerk" becomes essential, to take charge of the office in order to allow the agent more time for general supervision and, perhaps, for duties as ticket seller. Accounts and records naturally become more extensive and complicated. At Class A-2 stations a still more developed situation is found. Besides the "general agent" there are two or more "local" or "city" agents, freight and passenger. The warehouse breaks into two, an "in-freight" house and an "out-freight" house; the yard becomes a fully organized system of tracks, — receiving tracks, forwarding tracks, separating tracks, classification tracks, storage tracks, besides a network of house tracks, transfer tracks, team tracks, industrial tracks, etc. Finally at Class A-1 stations is found a "general agent" for each class of business, freight and passenger, with separate offices, also numerous "local" offices with their agents, besides the most elaborately developed terminal facilities. In fact the "station" here becomes a cluster or a system of stations instead of a single entity. The organization of the "office" as distinguished from the warehouse (in which are 175 to 200 men under foremen and a general foreman) of one of the freight stations of a cluster belonging to one of the great lines terminating in Chicago

is about as follows: chief clerk in general charge of all departments of the office, cashier's department, accounting department, in-freight rate department, out-freight rate department, claim department, over and short department, billing department, car-record department, department of general records. The "agent" is fully occupied with the mere duties of general supervision of the office, the warehouse and the yard.

The foregoing classification, which may be somewhat too symmetrical and formal in appearance, has not been framed without a studied reference to conditions actually existing, and is presented with the hope that it may prove of value in a general way at least. A larger number of classes than those arrived at might prove inconvenient; a smaller number might, on the contrary, prove too few for the purpose sought. For convenience' sake we add a table summarizing the above discussion of the classification of stations. (See following page.)

Now the railway system is made up — it is a huge cluster — of numerous stations of all these classes, joined, of course, by intervening trackage. *From* the stations its traffic arises, *to* the stations it is destined; in or among the stations is it immanent. Streams of activity flow between all stations taken indiscriminately, though of course most markedly to and from certain great centers. In all cases the station is a cardinal factor. Herein it appears, we may remark in closing this part of our discussion, that the station agent occupies a position of responsibility, usefulness and even dignity, and needs an intellectual and personal equipment of no mean type if he is to live fully up to the character of his position.

STATIONS IN GENERAL.

Class A. — Segregation of Traffic Department — Separation of Freight and Ticket Offices — General Agents, "Large" Stations.

A-1. — General Agents, freight and passenger; a number of "local" agents for separate stations, freight and passenger; most elaborate facilities and forces; cluster of stations.

A-2. — General Agent, "local" agents, freight and passenger; extensive facilities and forces; separate freight houses; large yards.

A-3. — General Agent, local freight and passenger agent; specialized facilities and forces.

Class B. — Competitive, Joint, Transfer Terminal Points. Agent or Agents, "Medium" Stations.

B-1. — Separation of freight and passenger departments; separate "agents"; liberal facilities and forces.

B-2. — Single agent in charge of a competitive office which is also a joint, a transfer or terminal point or all combined; considerable though not fully adequate forces and facilities.

B-3. — Competitive local stations which may also be transfer points.

Class C. — Local and non-competitive, Agent or not, "Small" Station.

C-1. — Local station which is also a terminal point.

C-2. — Typical local "way-station."

C-3. — "Prepay" station, no agent.

CHAPTER III

THE STATION IN ITS PARTICULAR CHARACTER — THE MECHANICO-PHYSICAL ASPECT OF THE STATION

The "Blue Print" or Map of the Station Grounds — The Yard, Jurisdictions of Agents and Section Foremen therein — Yard as a System of Tracks — Agents' Responsibility as to the Proper Condition of the Yard, Bridges, Ditches — Buildings on Station Grounds, Company and Others, Passenger and Freight Depots, Platforms, Necessary Repairs — Stockyards — Track Scales — Facilities for Handling Freight.

HAVING discussed the station in its general nature and in its relation to the railway system as a whole, we may now take it up in its particular, concrete character. The discussion will resolve itself substantially into three parts dealing with the station in and by itself, the station in relation to its environment, and the organic unity of the two. In dealing with the station in and by itself it seems best for our purpose — that of explaining as clearly and succinctly as possible the general principles of station service — to direct our attention primarily and chiefly to stations of medium size, "small" stations being too simple, "large" stations too complex in their arrangements and operations for this purpose. Reference to these two classes may be had as occasion arises, now and then. The *principal topics* which will have to be discussed are the following: the mechanico-physical aspect of the station, the railway equipment handled at the station, the station force, and the functions performed at the station.

To an agent taking charge of a station there is furnished by his company a "map" of the station, a "blue print" showing the contour of the station grounds, the location of tracks, buildings and other structures thereon, of streams and bridges, if any, of streets and street crossings, of section lines, of the boundaries of municipal blocks and lots through which the railway right of way extends, etc. With this "map" the agent is required, and naturally expects, to familiarize himself, as a matter of course; and, we may incidentally note, he may be inclined to consider himself not unfortunate if he have had a little previous instruction in the reading of blue prints or even in the constructing of them.¹ Questions frequently arise affecting the interests of the company, which render it necessary to appeal to the blue print for their decision. Railway property is proverbially subject to occupation when possible by various classes of habitual trespassers, some of whom are very insidious in their approaches and operations and must be carefully watched. That the agent may not be placed at a disadvantage for lack of the ability to put his hands on the blue print when wanted, it is well for him to keep it in a private drawer or, better still, in the station safe, if he happen to have charge of that; it is also well to be careful to see that it is not accidentally carried away and placed beyond his reach, perhaps, by some company officer paying a visit of inspection to the station.

Now the company grounds, of which the "blue print"

¹ The ordinary agent, it may be said, has not had such instruction and is sometimes at a loss to understand what the blue print means.

is the authentic and the authoritative "map," are, as distinguished from the company's ground lying between stations, the station *yard*, which as such has certain extreme limits marked either by posts or other signs expressly used for the purpose or by the outermost switches of the yard understood as designations. Within these limits the jurisdiction of the agent is in a sense confined, and his jurisdiction here is in a manner limited by that of the section foreman, who is held responsible for the keeping of the yard in order in a merely physical regard and for the maintenance of the track, of switches and perhaps of signals, while the agent has general jurisdiction over the company's property in the yard and over the operations conducted in the yard in the ordinary course of the company's business. The jurisdiction of the agent over the yard operations holds good to a certain extent as against all trains entering the yard from without except what are called "first-class" trains; they, i.e. all trains except first-class trains, are expected to enter the yard under full control, prepared to meet interference from operations in progress in the yard. The section foreman is, it is well to note here, subject directly to the authority of the roadmaster, but is generally understood to be obliged to coöperate with the agent as far as possible and to be in certain respects subject to his call, whether as regards matters pertaining to the yard or to some other things. We may conveniently at this point specify some of the things just referred to. The section foreman may, as the interests of the station seem to require, be called upon by the agent to make certain repairs in the track at a given

moment, to assist to a certain extent in keeping in repair and in good order station buildings, in transferring heavy or bulky freight, cleaning out or bedding, as the case may be, stock cars when necessary, icing refrigerator cars or cleaning the ice out of their bunkers when necessary, filling the station coal shed, cleaning snow and ice off station platforms, etc. In case agent and section foreman fail to agree about joint matters, the authority of the Division Superintendent may be invoked to decide. But to return from this partial digression to the matter of the yard. All applications for leases of portions of the company's grounds must be made through the agent; all encroachments which may be legitimate must be made with his knowledge and with authority obtained through him (from a superior officer), all others must by him be repelled. In general, it is incumbent especially upon the agent to protect the interests of the company as regards the yard and the property located thereon.

Proceeding now to an analysis of the yard and its contents — primarily or more especially for the benefit of those, of course, who are not already familiar with such matters — we may note *first* that there must be what may not improperly be called a *system* of tracks, comprising (1) one or more main tracks which are, naturally, simply continuous with the line of road extending over the country from station to station and are assumed to be kept clear and open, except when the contrary is strictly necessary, for traffic along the line of the road. Trains reaching or leaving the station may, and do as a matter of course, stop on the main line for a certain limited time, but no equipment whatever may

stand beyond such limited or necessary time on the main track at the station without good and sufficient reason and without permission from the trainmaster or train dispatcher and protection against possible approaching trains. Nor may main tracks be obstructed in any way by cars improperly placed on other tracks too near to the main track or tracks. And here it may be noted that it is required of both agent and section foreman to see that nowhere in the yard anything in the nature of a possible obstruction be allowed to stand within six feet of *any* track, whether main track or not. And as regards cars standing on sidetracks, the agent is expected to *see to it* and to *know* that the brakes are set on them so that they may not move and be blown by the wind on to the main track or too near to it. In its construction the main track of the yard is substantially identical with the line beyond the station, superior as a rule to the other tracks in the yard. (2) Of the other tracks, called sidetracks, one at least, called the "passing track" (i.e., a track by means of which, together with the main track, trains may be able to pass one another at stations), is of leading importance. At stations where trains regularly or frequently pass, the passing track becomes a secondary main track, as it were, and must be kept generally clear. At other stations it is useful for other purposes as well. The passing track must have considerable length, a capacity to hold say thirty to fifty cars. In its construction it cannot well be much inferior to the main track. Besides the passing track other sidetracks are the *house track* (or tracks) devoted especially to serving the freight house, a *team track* for the con-

venience of the various carload shippers not located in any sense on company grounds, *industrial* tracks accommodating warehouses, mills, elevators, coal yards, oil tanks, beer vaults, etc., located on grounds leased of the company or immediately adjacent to the company tracks or perhaps on private tracks branching off from the yard lines, *fuel* tracks at the company's sheds for fuel, *storage* tracks to accommodate loaded or empty cars awaiting movement, *crossover* tracks connecting other tracks in the yard, *transfer* tracks connecting the yard with the tracks of another line, a *roundhouse* track (leading to the engine house), *stockyards* track, etc. The different tracks here indicated *may* or *may not* all be distinct and separate tracks, according to circumstances. For precision and efficiency in conducting operations in the yard it is of course important, and even necessary, that each track should have a distinct name, or designation of some sort. Two or three of the side-tracks require very special attention: the *house track*, the *team track* and the *transfer tracks*. Of the house track (or tracks, if there be more than one) it is necessary that the agent make sure that *he* maintains entire control; it will not do to let others, say the crews of trains running in and out of the station, do as they like, or may find it convenient, as regards that. But on this point we may have occasion to speak more particularly later. The *transfer* track or tracks must be closely watched in order that no confusion of responsibilities and no disputes may arise as between the connecting lines. The team track, being in pretty constant use by many different persons, might easily become a source or scene of conflicts and trouble.

With the *condition* of the tracks in the yard, it is manifestly necessary that the agent should keep himself quite familiar. If any track or portion of track is out of order and unfit for use, it is his duty to see that all persons concerned are notified of the fact, and especially to see that the section men are notified to make promptly all necessary repairs. And pending the repair of the track, trains working in the yard or entering it from without must receive proper instructions as to the condition of the yard. It may be, and often is, necessary to notify the dispatcher of existing conditions in order that he may give proper warning to trains approaching the station. Tracks in the yard are apt to get out of order rather frequently. This is especially true of the less used sidetracks, constructed out of very inferior materials as they often are. Ties get rotten, rails turn over, bend or break, loaded cars thrown off the rails tear up the track in their movement, etc. All such occurrences necessarily interfere seriously with station operations, and it will not do for the agent to treat them lightly, much less to fall into a *habit* of being indifferent to them. On the contrary, he should be fully alert, and he should be well enough informed regarding track construction to know what he is talking about when called upon, as he certainly will be occasionally, to explain, to dispatcher, train master, or division superintendent, the condition of things in the yard, the nature and amount of damage done, cause of accident or of trouble arising, etc. Any remissness on his part in the performance of his duties in such matters might have very serious consequences to the company's property

or even to the lives of its employees. Doubtless the agent must depend much upon the section foreman in matters of this sort; nevertheless his own share of responsibility is sufficiently great. In case explanations are demanded by officers of the company he is very likely to have to bear the brunt of the ensuing correspondence, and all the more so if claims arise on account of personal injuries received as a result of accidents.

What has been said as regards the agent's responsibility in relation to tracks in the yard applies also in relation to bridges, to ditches and drainage, etc. If a cornfield adjacent to the company's grounds is, during a season of high waters, flooded by reason of the fact, or alleged fact, that the track offers obstruction to the proper drainage of the country, the agent is likely to be the recipient of a complaint which must be forwarded to his superior officers, and to be charged by them with the duty of investigating the facts in the case and reporting thereon. He may also be asked to explain why such facts had not become known to him and why they were not reported earlier.

The buildings on the station grounds are buildings belonging to the railway company or else to outside parties leasing company land. With respect even to the latter the agent has certain responsibilities. He must see that they are not located too near the tracks (i.e., not nearer than a line six feet from the rails of the track next to them), that the doors of them do not open out over the tracks or too near to them, and that they conform in color to the standard of the company's own buildings. Of the company's own buildings, with the

exception of some which may be in the charge of the local representative of the mechanical department, i.e. the roundhouse foreman, the agent is in special charge. The principal company buildings are a passenger house, a freight house, a fuel shed adjoining these, a larger fuel shed to hold fuel for the engines, a water tank, an ice house, a round house (i.e. engine house), an oil house, a car repairer's tool house, etc. The first three buildings named in the above list are especial objects of the agent's supervision, the others less so, being under the eye of the mechanical department, though, since the agent is general spokesman for the station, he may occasionally have to answer correspondence as regards some of them (e.g., as regards the capacity of the engine fuel shed or of the ice house). Speaking first of the passenger house, it goes almost without saying that this must be kept in the most perfect condition possible—in good repair, clean and neat, and comfortable and pleasant for travelers, etc. It may not be so obvious, to the inexperienced agent and to outsiders, that the meeting of these requirements sometimes demands rather strenuous exertions. The fact is, that very often they are *not* met and cannot *be* met, owing to the stress of the other matters which cannot possibly be neglected. Still they are things which have to be aimed at and for the careless or intentional neglect of which no agent is excusable. The exquisite orderliness and neatness with which, one sometimes may see, small stations, at which vacant time *may* be rather plentiful, are kept, certainly have their attractions and are their own excuse for being. The same degree of supervision and care have to be applied to the

freight house as to the passenger, though in a different way, to be sure. The agent must always know what he has in his freight house, should have goods properly classified and arranged, should keep nothing there which does not belong there, — no rubbish, dirt or other stuff that cannot be accounted for, — should protect against fire, etc. Ideally, the freight house should always be fit for rigid inspection. But how much easier it is to lay down this rule than it is to observe it at a busy station it requires only a little experience, or observation even, to teach any one. But the agent must of course keep his ideal standard well up. What has been said of freight and passenger houses applies *mutatis mutandis* to the station *outhouse*, for very obvious reasons. Depot platforms are, or should be, objects of particular attention to the agent. They must be kept in good condition, must be kept well lighted at night, must be kept as free as possible from obstructions and clear of snow and ice in the winter season. Failure or neglect as regards these points may subject the company to damage claims on account of injury done to passengers or employees. In the case of company buildings, including platforms, the agent has authority to request the aid of the section men, and undoubtedly this should be done. With the vigorous assistance of these worthy helpers the matter of washing the floors, the woodwork, the ceilings and the windows of the office and the waiting rooms, and of setting to rights the baggage room and the freight-house ware-room, becomes one considerably less desperate at times when the station force is overburdened with the ordinary routine of work. The agent, of course, has nothing to

say in regard to the original construction of the station buildings, but he may, from experience had in the using of them, be entitled to an opinion as to desirable and recommendable changes to be made in them. In consequence of a growth of the station's business, material alterations may be demanded, in which case he must make the station's needs known to the proper authority and seek to have them properly supplied. Business cannot safely be conducted in an office which has been outgrown; and the agent may need to insist that the office be enlarged, or else that new room be provided elsewhere for the storage of records. To protect perishable freight it may be necessary that a new cold-storage room be built into the freight house. To accommodate a greatly increased passenger traffic waiting rooms may require to be expanded. In regard to all such matters the agent must be alert. Needed repairs or alterations should be reported to the division superintendent and the superintendent of buildings jointly, with promptness and not once only, but oftener, if need be. As an immediate adjunct to the station buildings we must not forget the station park, the care of which devolves chiefly upon the section men, though the agent must, on account of the relation it bears to the general appearance of things about the station, feel warranted in assuming part of the responsibility for its proper keeping.

Among structures located at the station, the supervision of which devolves upon the agent, are the company stockyards. These consist of, say, half a dozen pens, capable of holding a trainload of stock, more or less, having in them facilities for feeding, watering and

weighing live stock. There is no need to dwell upon the importance of having everything here maintained in proper condition. At stations, however, at which stock shipments are infrequent it is somewhat too easy to overlook the stock pens and allow them to get out of repair in one respect or another. Company managers may, however, decide to let infrequently used stockyards remain in indifferent condition. To protect himself in such case, it is well enough for the agent to make periodically a report of their condition. In case a carload or a trainload of stock should unexpectedly put in an appearance and should fail to be properly accommodated he would then be entirely "in the clear" as regards any blame that might be charged. Defects that are apt to exist in stock pens not constantly in use are: pump out of order, leaky water troughs, scales out of kilter, gates off the hinges, fence with boards torn off, etc. Stockyards are often frequented by persons of vagrant and destructive proclivities whom of course the agent must encounter; namely, "tramps," or "hoboes," "gypsies" and persons who have live stock to provide for and are none too scrupulous as to how they treat a railway company's property.

We may mention, finally, track scales as one of the things for which the agent is held responsible. These and the proper use of them may demand much attention and care, as they must always be kept in order and strict records of weights must be made and preserved.

Before dismissing entirely the subject of the mechanico-physical aspect of the station it seems desirable to enter into some detail regarding facilities for handling freight (the student or reader may from his observations con-

struct in imagination a passenger depot for himself). For stations of the class here especially in contemplation — Class B-2 — probably the usual form of freight house and accompaniments is somewhat as follows: a rather long building, thirty to forty feet wide, with a platform one side and two or more tracks, with perhaps narrow platforms between, on the other. At one end of the freight house are the offices and a cold-storage room, the remainder being taken up by the wareroom proper, with scales in the center. All freight is handled through the wareroom, except such as is merely transfer stuff, which may simply pass over the platforms between the tracks. A slightly different and in some respects, if not on the whole, better form would be the above described form modified as follows: Let there be one track which, instead of extending alongside the freight house, merely runs up to the end of it and is accessible to teams. This track may be reserved for the reception of inbound local freight, which, having (presumably) been weighed at the forwarding station according to established rules, may be delivered directly to teams from the cars and so does not require to be rehandled. Anything requiring to be weighed may be taken into the house. By this arrangement of course it is still possible for teams bringing freight to be forwarded, to have access to one side of the freight house; and if necessary or especially convenient, freight may also thus be delivered to teams from the house. It appears that railway companies are not willing or are not able to furnish all the men needed to supply every emergency in the handling of freight and that an arrangement whereby the

services of outside draymen may be enlisted without any extra expense or trouble to them is a very feasible and even very practical one. The unloading of all freight through the warehouse certainly necessitates much labor on the part of the station force, which is not required when freight is delivered directly from the cars to teams. It is of course true that forwarding agents, in violation of rules, often neglect to weigh freight; but the remedy for their fault should be applied, not at the delivering station, but at the forwarding station itself. Necessary appurtenances of the freight house and its platforms are: plates of heavy sheet steel to be used as transfer aprons, bridges or gangways, trucks, movable scales (or, if the amount of transfer to connecting line at a joint station and connecting line, as may happen, requires that all stuff forwarded be weighed beforehand, scales, set in the transfer platform so that trucks may be passed over them), crowbars, hardwood rollers about four inches in diameter and four feet long, jackscrews, a hammer, nails, a saw, a broom, and, in addition, a large barrel of water as a possible protection against fire. With proper arrangements and appliances the work of a freight house may become decidedly interesting and even enjoyable, as well as efficient, but not otherwise. Of course it is "up to" the agent, when complete arrangements and appliances are once provided, to see that they are preserved and not allowed to deteriorate unnecessarily or to get lost. A detailed study of freight-house facilities as they exist at "large" stations would be extremely interesting but would take us too much beyond our prescribed limits.

CHAPTER IV

EQUIPMENT HANDLED AT THE STATION

Importance to the Agent of a Knowledge of Equipment — Analysis of Ordinary Box Car, Running Gear and Body, Their Parts — Application of a Knowledge of These in Car Inspection — Relation of Agent and Car Inspector — Responsibility for Repairs to Cars — Agent Called upon to Answer Inquiries of Dispatcher in Regard to Bad-Order Cars — Classification of Freight Equipment — Leading Kinds, Number, Sizes, Uses — Designations of Cars — Light Weights of Cars, to be Ascertained when not Known, "Estimated" Light Weights — Abuse of Cars by Shippers and Others.

By *railway equipment* are here meant the cars necessary for the movement of traffic. The necessity of equipment is self-evident and will not here be argued. Railway equipment is a matter of primary importance and interest, not to an agent so much as to the representatives of the mechanical department of a road; nevertheless, owing to the intimate relation existing between equipment and the movement of traffic, the agent must be held responsible for the possession of a certain amount of knowledge of it. Such knowledge is especially necessary at small stations, where no representative of the mechanical department is usually to be found, but it comes into play very usefully at any class of station. Very serious consequences might follow the misapplication of equipment, through ignorance on the part of the agent as to its real condition and consequent fitness or unfitness for its proper use. It is

necessary even to adopt to a certain extent the point of view of the mechanical department and study the matter of car construction. Before doing so we may premise that it is chiefly, or almost solely, *freight* equipment which requires such careful consideration on the part of the agent, for it is only this equipment with which he has directly much to do. Passenger equipment is handled by the mechanical department representatives, by passenger train crews, or others especially designated. Of it, it is sufficient if the agent merely knows the names and general uses of the various kinds, — baggage cars, coaches, chair cars, parlor cars, dining cars, buffet cars, sleeping cars (standard, tourist, compartment), observation cars, private cars. Of freight equipment, on the contrary, there is absolutely necessary to the agent a knowledge that is not merely superficial but is somewhat detailed and thorough.

We will begin our discussion of freight equipment by an analysis, necessarily somewhat rough and imperfect, of an ordinary box car, or "box" so-called, an object that is in its general appearance familiar to every one. Such a car consists of two main parts: the body or box in which goods are transported, and the running-gear, upon which the box rests and is carried along the track. Taking the latter first, we note that the running-gear consists of: (1) two trucks, one at each end of the car, so connected with the body of the car as to be not rigidly fixed to it but in certain ways movable with reference to it, for the purpose of adaptation of the car in its movement to necessary inequalities in the track upon which it moves,— that is, the ordinary (American) car truck is a swivel

truck; (2) certain arrangements or rigging known as "brakes," for interfering with the motion of the wheels and stopping the car when necessary or keeping it from moving or being moved when it should stand still; (3) appliances for connecting cars with one another in a train. The main parts of the truck are: (1) four wheels (made of cast iron, or, more generally, of steel) and their axles, the smoothly turned extremities of which, projecting beyond the wheels and supporting the load above, are known as the "journals;" (2) certain bars called "arch bars" and "tie bars" joining certain boxes in which the journals are placed; (3) the "truck bolster," or the beam supported by the above mentioned bars on either side of the car and directly supporting another bolster called the "body" bolster, upon which the "box" of the car rests. The wheels have at their circumferences "flanges" to keep them in place on the rails. The braking apparatus consists of a "brake beam" to which are attached "shoes," by means of which friction is applied to the circumferences of the wheels, the beams being governed by means of a somewhat intricate apparatus controlled by compressed air supplied by a pump located on the engine; there is, besides, an arrangement for controlling the brakes merely by hand, applied to a wheel or rod at the upper end of the "brake staff." The coupling apparatus consists of a coupler (with its "knuckle," "lock block" and "lift pin") attached to "drawbar" or "draft rigging" of some nature, the coupler being so constructed as to close and lock automatically when the knuckle of one car is struck by the knuckle of another approaching it. Of the *body* of the

car the principal parts are: (1) the sills, — side sills, center sills, intermediate sills, — extending the entire length of the car and forming the foundation of the body; (2) floor beams extending transversely at the ends of the sills; (3) the floor or deck of the car; (4) the box proper, with sides, ends, roof, running-board, side doors, one on each side, ranging in width from five to eight feet, end door or end doors, grab irons, linings (inside), posts, braces, etc. Painted on the side of the car are the road “initials,” a number designating the individual car, frequently the trade-mark of the company owning the car, figures showing the inside dimensions of the car, from which may be derived the space capacity of it, other figures showing the load capacity, others showing the weight of the car when empty or its “lightweight” so-called, etc. Now the fund of information contained in the above analysis is certainly small enough, but it may serve as a nucleus of a larger fund, and if practically applied possesses real value. By means of it the more common and obvious defects constituting what is termed a bad-order car may be discovered and properly named, — a wheel with a flat rim or a broken flange, a bent axle, a cut or rough journal, a missing brake shoe, broken brake rigging, absence of air brakes or of all brake apparatus, a broken knuckle or other defect in the coupler, loose or broken drawbar, defective sills or floor beams, leaky floor, loose and leaky sides, doors missing or with defective fastenings, broken posts at ends or corners or sides of cars, leaky roof, defective running board, missing grab irons or handholds, etc. Once started in the direction of studying such matters, the agent may, by

means of a little occasional assistance from the car inspector at his station or by means of a borrowed copy of the Code of the Master Car Builders' Association Rules, make himself reasonably well acquainted with the more fundamental requirements of good freight equipment of which as a traffic officer he ought to have a knowledge. It would be a pity if from all lack of such knowledge he should constantly be the means of his employer's suffering loss from the misuse of equipment falling into his hands. Suppose, for instance, that a car with an (undiscovered) broken flange is loaded with, say, 40,000 pounds of grain, is picked up and put into a train and hauled away; the chances are in favor of the car becoming derailed and a wreck occurring, with resulting damage small or great, according to circumstances, — as easily the latter as the former; the agent cannot be exonerated from blame unless perchance there may be a car repairer at his station behind whom, so to say, he may take refuge. In this case, it is true, the responsibility for the damage that occurs would rest with the regular car inspector. And this suggests the matter of the relation of agent and car inspector at stations where both are situated. It is well enough for the agent to allow the inspector to bear alone his full share of the responsibility for the proper inspection of cars and decision as to the existence of bad order in cars. It is probably true that an inspector, realizing the desirability of avoiding as much as possible delays to traffic, will sometimes virtually say to the agent (regarding a car that is not really fit to be moved), "I will allow this car to go forward if you think best," intending thereby to invite

the agent to share with him the responsibility for the movement of the car. The agent is not really bound to do this, and will not do it if he is wise. He has responsibility enough of his own to bear. An agent may, however, in case he is fully aware of a habitual disposition on the part of the inspector to be over-anxious and over-particular regarding the condition of cars, safely and wisely (i.e. if he have some real knowledge of cars) insist upon having cars moved in urgent cases, even though the inspector may be disinclined to allow them to go forward and does so only with the understanding that the agent assumes responsibility jointly with him. It certainly would not do for the agent to be wholly supine and silent in such a case, permitting traffic to suffer through delay.

As to repairs necessary to be made to bad-order cars, the responsibility for them rests with the repairer, wherever there is a repairer, otherwise with the agent, so far as may be practicable. Very often, perhaps in a majority of instances, it will not really be practicable; but often it may be if the agent will choose to think so. And in times of car shortage the will to think so proves a valuable quality in the disposition of the agent. At other times it is not necessarily important that a car should be repaired by an agent simply because it happens to be discovered by him in bad order. He may have no need for the car, and may properly let some one else who does need it put it in shape for use. But he ought never to allow himself to refuse or lose a shipment merely from lack of sufficient energy to do a little light repairing to a car in his possession. Of course it might not at all do

to load the car, letting it remain in bad order, since this might result in serious loss to the shipment carried.

There is a *special* reason, in addition to all the foregoing, why the agent should be well informed, and feel an interest in the matter of equipment. It frequently happens that on very short notice the agent is called upon by the dispatcher for a special report as to the condition of a car at his station of a kind for which there is immediate and urgent demand. Without a report from the agent regarding the car, it may be impossible to fill an important order.

We have thus far had in mind ordinary box cars chiefly. What has been said of them applies *mutatis mutandis* to other kinds of cars.

But not to dwell longer upon the topics we have been discussing, we pass to the *classification* of freight equipment. Its principal kinds are the following: ordinary box cars (34 and 36 feet in length), large box cars (40 to 50 feet in length), furniture, vehicle, and automobile cars (very large "boxes" with wide doors or double doors), beer cars, refrigerator cars, vegetable cars, stock cars (including single-deck or single-floor, double-deck and "palace" stock cars), gondolas or coal cars, ballast cars, flat cars, tank cars, way cars or cabooses, and a variety of cars limited in number and having very special uses, as truck cars, boarding cars, ballast unloaders, ballast spreaders, pile-driver cars, hand-derrick cars, steam-derrick cars, steam-shovel cars, rotary snowplows, ordinary snowplows, paint cars, weed burners, supply cars, shop cars. These many classes of cars are, as regards construction, all similar

as to their running gear; they differ as to their superstructure or bodies. Of these many classes we shall not undertake to speak in detail. An adequate knowledge of them could be gained only by the aid of observation and experience. We shall content ourselves merely with some miscellaneous remarks concerning a few leading classes of them. Ordinary box cars, the lengths of which have already been indicated, have a height of about 8 feet and a width of about 7 feet on the average. Their load capacity ranges from 40,000 pounds (or sometimes less, perhaps) to 100,000. In number they are, except in times of car shortage, practically indefinite; and except at such times, or unless they happen to be "foreign" cars, special permission is not necessary for the use or application of them. Of large box cars (height 8 feet, width $8\frac{1}{2}$) the space capacities of which are much greater, though their load capacities are not, this is not true; still less is it true of furniture, vehicle and automobile cars. All these classes — and particularly the last three named — are special in their use. Their number is limited, and they require to be under special control; permission to use them must be obtained from the dispatcher or perhaps the car service agent. Very much the same may be affirmed regarding beer cars, refrigerators and vegetable cars. These three classes are somewhat similar in having thick "insulated" floors, doors, walls and ceilings. The refrigerators have also ice bunkers, drainage pipes and perhaps, also, special ventilating arrangements. The capacities of these cars range from 40,000 to 60,000 pounds. The number of cars in these classes is comparatively limited. Very often, though

not always, special orders have to be placed in order to obtain them for use. Stock cars, which are cars having the appearance of immense crates, are, except in busy seasons, so plentiful as to be easily obtainable, though it may be necessary to order them. The more common sizes are 34 and 36 feet in length, although 40-foot stock cars appear to be rapidly increasing in number. Their load capacities range from 40,000 to 70,000 pounds. Double-deck stock cars are used for shipping sheep and hogs; "palace" cars for shipping horses mostly. Gondolas or coal cars, the bodies of which are low boxes without roofs and, generally speaking, without doors, have a load capacity of from 40,000 to 100,000 pounds. They are rather numerous and not very difficult to obtain on order when the season is not too busy. Flat cars, consisting merely of a running-gear supporting a deck, vary in length from 30 to 45 feet, in their capacities from 24,000 to 100,000 pounds. They are not very numerous and not very easy to obtain on order. The familiar cabooses cannot be said to be placed at the disposition of agents at all; they are assigned by the train master, or other official, to different conductors and train crews, or to different runs for regular use. By the agent, no especial account is kept of them. The classes of cars still unmentioned may be dismissed with the single remark that the mere names of most of them suggest in a manner their use and character.

Now it will be at once obvious that each road or railway system must have some method of designating its cars, not merely individually but according to classes.

The method differs somewhat on different lines, but is always simple enough, perhaps. Generally speaking, each class merely has assigned to it a certain group or range of numbers,—say, to furniture cars numbers 6000 to 9999; ordinary box cars, 10,000 to 29,999; refrigerators, 30,000 to 34,999; beer and vegetable, 35,000 to 39,999; stock cars, 50,000 to 59,999, etc.; or one kind of cars may be designated by even numbers and another by odd. Each road issues a table of freight equipment showing the numbers assigned to each class of cars and showing the dimensions and load capacities of all cars. Any car clerk who may care to become an expert in his business may in time acquire the power to judge as to the kind, size, capacity and other attributes of almost any system car the number of which may be named to him. Many car clerks do acquire astonishing facility in such work.

Something requires to be said about cars which fail to show, by proper stencil marks upon them, their lightweights or weights when empty. The knowledge of such weights is necessary in the transaction of business. A car may be weighed with its contents, but if the lightweight is not known directly from the car itself or from a published table of lightweights, the actual net weight of a shipment may remain an unknown quantity, or one to be discovered only by considerable extra labor and perhaps expense. The lightweight of cars should be made readily accessible in all cases, and when it fails to appear on the body of the car it should, at the earliest practicable moment, be ascertained and placed there. By deducting it from the gross weight of the load (car

and contents) the agent ascertains the net weight of a shipment and can assess charges accordingly. It is therefore made a duty of agents to watch the lightweights as stenciled on the sides of cars and to report any omissions or discrepancies; also, if possible, to see that cars on which lightweights are not shown get weighed, the representative of the mechanical department coöperating with agents in this task. There are certain detailed rules regarding this which cannot be recited here, but may be found in any road's circular of lightweights. In the same circular may be found a table of "estimated" lightweights to be used in case actual lightweights do not happen to be shown on cars. Such a table is sometimes given in employees' time-tables, for the use of agents and conductors in estimating the tonnage of trains. We give a few examples by way of illustration: The lightweight of 34-foot box cars is 28,000 pounds; of 36-foot, 34,000; of 40-foot, 36,000; of 34-foot stock cars, 28,600; of 36-foot, 32,000; of refrigerators, 36,000; of coal cars, 22,000 to 29,000; of flat cars, 20,000 to 28,000 pounds.

The treatment which is given cars by shippers and others is a matter demanding the agent's careful attention and may properly be discussed here. Not to speak, at this point, of the delays caused by shippers to the handling of equipment, attention is here called to the fact that shippers sometimes abuse equipment by altering it in little ways to suit their own convenience, making holes in the floor or in the sides or roofs, driving spikes into the timbers. Tramps will sometimes make fires in or under cars to cook food or warm themselves.

Only a general alertness on the part of the agent can prevent such occurrences. The managers of companies sometimes show special recognition to employees for watchfulness and considerate attention in matters of this sort.

CHAPTER V

THE STATION FORCE AND ITS NECESSARY QUALIFICATIONS

Necessity that the Station be Properly Manned — General Conditions — Duties and Qualifications of Agent, Cashier, Operator, Freight Clerk, Yard and Car Clerk — General Rules of Conduct to which Station Employees are Subject — Value of General Information to the Station Men and Growing Demand for it.

It is probably sufficiently evident to the student or reader that a station, in order to be properly managed, must, if we may say so, be properly manned; must be fully and properly equipped with men. Even at small, comparatively insignificant stations, men of poor qualifications are out of their places; they do not, because they cannot, *last* long. In their hands station matters, which are proverbially somewhat complex, eventually get into a snarl that is straightened out only by the arrival of the traveling auditor, who is forced to recommend a change in the station officer. And even men well qualified will fail in station management unless properly supported by good assistants in sufficient number. Many "small" stations ("small" in a sense which has already been fully explained) are well managed by a single man of good qualifications, performing alone all functions or representing at the station all the leading departments of the central organization of the system. At other small stations, on the contrary, two or more good men are required, to perform the necessary functions

properly. The division of functions at the small stations is necessarily incomplete; the maintenance of a complete division at such stations would prove too expensive for any railway system. Now, the individual man at the very small station needs a breadth of knowledge regarding station duties which may not be absolutely necessary, however desirable, in the individual who is not the agent at a larger station. At the larger station there is a division of functions among a larger number of men and a more thorough knowledge of each branch of work; there *may* be a division of labor fully corresponding to the natural division of functions in the central organization. In general, it may be said, as regards the kind of "talent" required in station work, that it must be somewhat versatile and ready, equal to frequent little emergencies, including, as ingredients, physical energy, quick powers of observation, fair mathematical ability, good judgment, a certain breadth of information and facility in conversation and in writing, affability of manner, energy of will and loyalty of disposition. At the ticket window, at the telegraph instruments, at the cashier's desk or the counter, in the warehouse or on the warehouse platform, in the yard and in the baggage room, men are needed who are generally apt and efficient. One may find illustration of this fact if, for instance, one observes and studies what takes place during the crises in the course of a day's business, namely, at the times of the departure of trains. At such times quick and precise action is necessary to meet a sudden emergency, for patrons of the railway, unregardful of the convenience or needs of the

station force, flock to the train at nearly the last minute and clamor to be waited upon all at once; there is no place for ignorance and stupidity on the part of the station men; readiness and efficiency are absolutely necessary, otherwise patrons "kick" and the inapt and inefficient station employee becomes, most likely, the victim of an error or of errors which he has to make good by the payment of cold cash to the company or by being subjected to a reprimand or a "roast" from some one in authority. One may be left to judge what occurs if there be many trains a day.

At medium-sized stations, such as we have here in view chiefly — Class B-2 stations — the station force may include, let us say, (1) the agent, (2) a cashier, (3) an operator and ticket clerk, (4) a freight clerk and warehouseman, (5) a car and yard clerk, (6) a mail clerk and "helper," not to mention a car inspector, who coöperates with the agent when called upon but who belongs rather to the mechanical department than to the station proper. (At a main-line station three operators are legally required, but they may be called upon to perform the duties of freight clerk and warehouseman or other duties, as well as duties immediately relating to telegraphic service.) Thus, it will be seen, there is a considerable, though incomplete, division of labor in relation to functions. It is necessary here to discuss the duties of the different employees a little in detail. A *full* understanding of these matters, however, can arise only from a knowledge of the station functions, the explanation of which constitutes the principal part of the task of the present work.

(1) The responsible head of the station is naturally the agent. To him are issued all commands and instructions from superior officers; and he must see that they are fully executed or must furnish an explanation of any failure in their execution. In this respect it may almost be said that subordinate employees at the station are not *known* or *recognized* by the superior officials. The quasi-military nature of railway organization, as well as the general law of agency, necessitates this. The agent is required to have a thorough knowledge of the company's published rules and regulations, together with a disposition to comply with them and to see that his subordinates do likewise. He must keep himself interested in, and informed in regard to, all matters in the vicinity of his station affecting the company's interests, and view them in the same light as if they were his own matters. He is naturally not allowed to become engaged in any occupation or to have any interests that might conflict with his duties towards the company. He is expected to be able and ready to answer inquiries in regard to agricultural and industrial conditions, municipal matters, political affairs, the temperance situation; in regard to prominent personalities and to employees of the company; in regard to the business of competing lines, new enterprises in the community, etc., etc. As a matter of course he cannot use the company's funds to promote private schemes, nor may he use his position for self-aggrandizement. As agent he is pretty completely subjected to the service and control of his employers; but he is not bound to violate the law in his obedience to them. And this aspect of his

relation to the company appears to have been strengthened in recent years by very important federal legislation regarding railway matters, in which legislation the agent is made directly responsible before the law, independently of the instructions of his employers. And this fact, we may note in passing, is an argument directly in favor of a more thorough education of agents than is to-day common. Now the agent's dependence upon the authority of his superiors and his responsibility to them have a necessary correlative in his own authority as regards matters at the station: since he is made *responsible* for the station he *must* have *control* of it. If he is to "run the station," he must be *allowed* to "run" it, which implies not merely authority over other station employees but also a certain independence of the will and judgment of every one else, — within limits, of course. He cannot properly think of himself as a *mere tool* or *puppet*. As to the particular duties of the agent we may say that, in addition to the duty of general control and supervision, he may perform such miscellaneous duties as may seem best on the whole for the station: he opens and studies all correspondence, answering, himself, that which is important and leaving to others the answering of the rest, and yet keeping an eye upon all that leaves the office (some agents even make it a practice to read and sign all correspondence emanating from their office — a thing which cannot well be done in a very busy office); he may sell tickets or assist in selling tickets; take charge of the freight tariffs and revision of freight billing; may handle claims; *must* solicit business and look after the company's interests in the community. If his cashier

or his operator falls sick or is temporarily absent, for any reason, from duty, he may fill either place; he may even "rustle" baggage, handle freight or scrub floors and wash windows, if there is any need. He certainly has no excuse or occasion for false pride in regard to his duties. On the other hand, he must beware of the common fault of undertaking to *do* everything, forgetting, meanwhile, to see to it that other employees are properly performing their duties about the station; he must not neglect the duty of supervision. It is scarcely necessary to add that the agent finds wide opportunity for the exercise of intelligence, judgment and character, as well as, also, good nature and generous consideration of other employees. (2) The man who acts as cashier, whether he bear that title or not, naturally has charge, first of all, of the cash and the cash-accounts, matters — it is perhaps not entirely unnecessary to say — demanding the strictest attention and fidelity to duty; he makes collections and has exclusive control of the combination of the company's safe; he may also handle general accounts — ticket and freight — to a greater or less extent; he is the agent's chief assistant, as, at larger stations, the "chief clerk" is. For success in his duties, he must be possessed of methodical habits of thought and work and of the habit of firmness in dealing with patrons. (3) The "operator" is in charge of the telegraph service and, in addition, performs miscellaneous duties such, perhaps, as selling tickets, assisting in keeping the general accounts, in billing freight, checking baggage, etc. He keeps the station in touch with the dispatcher's office and with other offices along the line, not the least important of his

duties being to keep informed as to the movements of trains, upon the knowledge of which very much of station activity may depend. He should be a man of an alert temperament, well informed, and a good judge of correct, clear, pointed language. The more general information he has, the better. A stupid, slow, or blundering person makes a poor operator. (4) The freight clerk is charged with such duties as handling, checking and billing freight, keeping general freight accounts, "over," "short" and "bad-order" records, interline records, etc. He practically has charge of the freight house. He may assist in the handling of baggage. Habits of care and accuracy, combined with good judgment and breadth of information in regard to the conditions of shipping, are necessary to a good freight clerk. (5) The yard and car clerk will have charge of all cars and car reports, of the switching operations in the yard, the making up of freight trains, the demurrage and per diem accounts, etc. He more than any one else is in direct relation with the train-service department, and has peculiar duties, and needs peculiar qualities, on that account. He especially needs judgment, energy and firmness in dealing with men. (6) The "helper" naturally assists wherever needed, and especially in the matter of maintaining cleanliness about the station.

But enough has been said to indicate in a general way the nature of the duties of station employees and the abilities required for the proper performance of them. It must be evident that there is here abundant room for the exercise of a liberal degree of intelligence, judgment

and energy of character; that is, for manhood of a concrete and substantial sort.

It remains to call attention to the fact that to enter actual station service on any of the existing railways certain conditions, physical, mental and moral, have to be satisfied. The candidate must pass a physical examination, must answer important questions regarding his life record, his birth and parentage, his physical constitution, his past occupations, his financial status and his present habits, giving satisfactory references as to his personality. The candidate is required to file an application with an approved fidelity company for a bond which shall serve as a guaranty to the railway company for the faithful performance of duties on his part. Should the fidelity company decline to become his security the railway company will refuse to admit him to its employment. Certain rules regarding the character and conduct of employees entering or remaining in the service of the company are substantially as follows:

1. Employees must be provided with a copy of the company's rules, must familiarize themselves with them and pass an examination upon them. If in doubt as to their meaning they must apply to proper authority for explanation of them.

2. Employees must observe and obey the company's rules and instructions or leave the company's service, and to enter and remain in the service is assurance of willingness to obey.

3. Employees must render every assistance possible in carrying out rules and instructions and must report any observed violations of them.

4. The use of intoxicants while on duty is prohibited; their habitual use is sufficient cause for dismissal from service.

5. In cases of doubt in the performance of duty, safety must be preferred to speed.

6. In case of danger to the company's property employees must unite to protect it.

7. Employees in accepting employment assume its risks.

In the foregoing rules, one sees, the spirit of complete loyalty to the company is intended to be expressed.

The foregoing discussion taken as a whole is based upon what may perhaps be regarded as a slightly restricted view of the proper qualifications of station men; i.e. a view of their qualification merely for duties relating directly to matters at and around the station. This view is of course a practical and necessary one. A broader, more theoretical view, and one having its own value, is possible if one remembers that really intelligent men, whether station men or not, take an interest in the wide, the universal, bearings of truth and incline to the formation of general opinions as such. Within recent years the knowledge of railway matters in general has undergone a remarkable development, and schools have been and are being established for the cultivation and spread of such knowledge. And, in fact, railway matters themselves have gradually assumed stupendous importance and are most interesting subjects of study apart from narrow, practical bearings that may be involved. The questions of railway history and development, of the financial problems of railway projection,

organization and operation, of rate construction, of railway amalgamation, of legislative control of railways, are all burning topics in present-day discussion. This is not the place to attempt an explanation of these matters; volumes would be required for that. Incidentally some things pertinent may be said hereafter in the pages of this book. The object of the present paragraph is to suggest the existence of a broader field for the intelligence of the station agent than that merely of his station and how to "run" it — a field to which he may advantageously extend his knowledge without losing his hold upon the territory which he already occupies. And in so far as he is in a position to act as an educator of the shipping public in railway matters, he is rather bound to do something in that direction. Furthermore, the time may not be so very far distant when railway managers generally will begin to conceive that the broader intelligence in railway matters is more serviceable and more desirable, even in a station agent, than is the narrower; or, to speak more accurately, the two together are better than only one of them.

CHAPTER VI

FUNCTIONS PERFORMED AT THE STATION

Departments of Organization Represented at the Station — Interrelation of Station's Functions.

IN discussing the relation of the station to the system as a whole, it was made apparent that the station sustained relations to, and so represented in its operations, several great departments of the central organization of the system, and that these relations constituted the general functions of the station. Those departments were, in particular: the operating, the traffic, the treasury, the accounting, the supply, the legal and the claim departments. We shall treat of the station's functions, therefore, under such headings as: *The Station and the Operating Department*, *The Station and the Traffic Department*, and so on through the list of departments.

By way of introduction a few general remarks are proper regarding the relation of the functions. No doubt they are to be conceived as ideally coexisting in harmony with one another, each being a necessary factor in the total working of the station. Of this fact the intelligent agent is fully aware, and he endeavors to allow to each its proper importance and to represent in himself the organization in its true totality. But sometimes it happens that this ideal harmony fails of realization at the station. Some natural proclivity or

inclination on the part of the agent or his men may interfere in this regard. An agent who has reached his position through some particular channel of the service may be disposed (unconsciously, of course) to favor one branch of the station's business, e.g. telegraphic duties, at the expense of the rest. In such case trouble arises, sooner or later. Sometimes disharmony arises through no fault of the agent, in that the volume of business at the station becomes too great for the number of men allowed for the handling of it; so that something or other must be slighted, or even neglected altogether. In such case the agent is bound to protect the interest of the station as a whole, and even perhaps, if his superior officer, usually the division superintendent, cannot relieve the situation, to lay the matter before the heads of departments for final adjustment. It would not seem to be his duty to do more. Unfortunately it may happen that those officials, having numerous "troubles of their own," may give the agent's representations small attention and may arrive at the decision that a new man should be appointed to "run" the station, whereas the new man may, most likely, prove no more able than the old to cope with the existing situation because what that really demands is merely a larger force of men, not more competent men. It is not misrepresenting fact in general to say that this is often the case. It frequently happens that railway administration fails to be complete and organic because the central organization fails to get into "touch" with practical conditions at the circumference of things, namely, the station. A disharmony of functions results, followed by injury to the company's

business. A higher degree of intelligence than exists among agents and their superiors will tend to remove such a state of affairs. As to the interdependence of the departments of railway organization we shall have occasion to speak again.

CHAPTER VII

THE STATION AND THE OPERATING DEPARTMENT

Double Meaning of Term *Operation* as Applied to Railway Matters — Operating Officials and their Instructions — Book of Rules and Regulations — Occasional Circulars — Company Magazines and Printed Bulletins — Railway Conferences — Traveling Instructors and Inspectors — Methods of Discipline — Intelligence and Character Necessary in Station Service.

It seems unnecessary formally to define what is meant by the term *operating* in the present connection. It appears advisable, however, to direct attention to a double meaning of the word *operation* as used in railway matters. In one sense the term signifies operation as distinguished from and complimentary to organization; in another sense, it denotes the operative function as a coördinate of the traffic. The latter, of course, is the sense implied in the term *operating* as used in the above heading.

The managing operative officials with whom the agent is brought into relation are principally as follows: The division superintendent, the train master, the chief dispatcher, the car-service agent; also, to a certain extent, the superintendent of bridges and buildings and the road master. The instructions issued by or through these officials — especially the first three named — constitute one main source of information and authority by which the agent is governed in his "operative" capacity. Occasionally a circular may be received from

the office of the general manager, or even from that of the vice-president, if there be one, in charge of the "operation" of the entire system. It is to officials of the operating department that employees are directly responsible in their *personal* capacity or as subjects of *discipline*.

A chief source of information and authority is also the operative department's Book of Rules and Regulations. This is really a manual of instruction, dealing with such topics as: the general conditions of entering and remaining in the company's service, nature and classification of trains, railway time and time-tables, yards, signals of various kinds, the movement of trains, train orders, general duties, duties of each class of employees in the operative department (station men, trainmen, trackmen, bridgemen, etc.). Each class of employees is required to pass an examination upon the Book of Rules and Regulations so far as it may relate to their duties. An educational spirit and method are inculcated to a certain extent, and, in fact, a grade of intelligence rather more than ordinary gradually comes to prevail among the employees, so far, that is, as their special work is concerned. The copies of the Book of Rules, etc., placed in the hands of employees, are, it may be observed, charged to them and must be preserved and accounted for. The agent is of course expected to see to it that his men acquaint themselves with the company's rules and regulations applying especially to them and that they govern themselves in accordance therewith.

The Book of Rules and Regulations deals with matters

of a permanent nature; matters varying from time to time according to circumstances are covered by certain department circulars issued as necessity dictates from the offices of the division superintendent and the train master. These circulars must be filed and their contents carefully studied. They have to do with such matters as: existing improper applications of rules, new enactments of rules, safeguards and precautions in operation, special contingencies and emergencies, special handling required by certain classes of freight, as live stock or perishable freight, etc. It is no small task to keep thoroughly in touch with all matters to which the circulars relate. To do so, the agent must be constantly studying; the educational process must be unceasingly maintained. Requirements frequently change; *e.g.*, a mode of handling equipment, applicable at one time, may not be at all applicable at another, and as circumstances change in this regard new circulars are issued. Circulars must often be reissued for the benefit of new employees or to enliven the decayed memories of old.

Other educational means employed by the operative managers are magazines or periodicals regularly edited by them or their representatives and issued for the use of employees. In these appear articles prepared by experts, including heads of departments. Items of news and of personal notice and comment are inserted. Everything possible is done for the purpose of raising the grade of intelligence and increasing the spirit of loyalty along the line.

Still other educational means are, regular monthly, bi-

monthly or quarterly meetings and conferences between employees and officials, at which meetings experiences are mutually exchanged and a common understanding and mutual good will brought about, to the general improvement of the "service."

Again, instructors and inspectors are occasionally sent out along the line to give needed assistance in preparation for examinations or in performing daily tasks. Among these we may specify the traveling auditors, whose *special* duty is to examine accounts but who assist in other ways as well.

Discipline is added to instruction by means (1) of inquisition or reprimand, chiefly in correspondence, (2) of a system of marking, (3) of transfers, suspensions or dismissals.

From all the foregoing it may be seen that the spirit and method of railway service are, to a considerable extent, a spirit and method of intelligence and discipline; men are valued according to what they can *intelligently do*. The element of discipline is especially strong. The railway employee is continually conscious of some higher authority to which he must "report" and must render faithful obedience. It may be that he is sometimes too much warped by this consciousness. But in some branches of railway activity a quasi-military authority with corresponding submission seems indispensable, no doubt. Great human interests demand it, even though it may occasionally be felt to have the appearance of an infringement of human liberty. The peculiar combination of knowledge and discipline necessary to railway service gives it a character of its own, one

which has its advantages and from which men in certain other walks of life may perhaps learn something of value. It can hardly be doubted that the influence exerted by the railways towards the formation of character of a rather concrete and substantial type is something insignificant neither in strength nor in extent. Certainly there are many positions in the railway service, to fill which competently, men of such a type of character are required.


CHAPTER VIII

RAILWAY TELEGRAPHIC SERVICE

Vast Importance of the Telegraph in Railway Affairs — Physico-mechanical Aspect of the Telegraph, Batteries, Instruments, etc. — Applications of the Telegraph on Railway Service, Daily Telegraphic Reports, Train Orders, Messages, and Tracers — Care Necessary in Preparation of Messages — Duties of the Operator — Telephone as a Substitute for Telegraph.

WHEN a railway is thought of what is usually present to the mind are the long lines of track, the locomotives, the cars, freight or passenger, drawn, the quantities of goods hauled, the speed and comfort with which passengers are transported, great station buildings, the telegraph lines along the right of way, the immense utility and convenience of all these things. But the part played in the great economy by the telegraph lines and the service which they render possible are but partially appreciated, being in fact very imperfectly understood, notwithstanding all that may have been said of them in the outside world. It is probably true that even the majority of the telegraphers themselves — though they ought to be able to do so if they would but reflect — do not fully realize the importance of the telegraph in railway operation. It is but an external means, an auxiliary to transportation, nothing — i.e., no freight nor passengers — is carried in or on or over or along the wires which are at a distance from the track. And yet, to one who

reflects upon the matter it is perfectly plain that railways and their operations, always astonishing by their extent and brilliancy, could never have become anything at all approaching what they are without the telegraph lines and what they make possible. The telegraphic service may be said to constitute the self-consciousness of the railway system; and as in the individual human being *self-consciousness* forms the core and basis of external intelligence and will, so the telegraph service forms the core and basis of the guiding activity of transportation, or at least the immediate instrument of that core and basis. By means of that service the affairs of a railway system thousands of miles in extent may in a few hours' or even a few moments' time be centralized in a single office, indeed in a single mind, that mind thereby possessing a sort of omniscience of the system; and by means of the telegraph service the same mind may exercise its omniscience outwardly over the entire system, thereby possessing a corresponding omnipresence. The foregoing statements, which may appear to be merely pardonable, or rather perhaps unpardonable, literary hyperbole, will stand the test of observation and experience. One may get an inkling of their truth if one happens to spend some hours in a railway telegraph office when the telegraph service chances to be badly crippled, and compares what occurs then with what occurs when the service is fully normal. In the former case everything seems dead; all life has vanished; operations are halted or are conducted slowly and with extreme caution, — a state of things in striking contrast to the normal state of things in a busy railway telegraph office.



And the fact that the telegraph may in the future — the *near* future, it would seem — be supplemented by telephonic communication cannot alter what has been in the past. But without dwelling longer at present on such considerations as these, we will take up the telegraph service in a more pragmatic way, explaining its nature and use.

First, we have to speak very briefly of the telegraph in its physico-mechanical aspect. A large “battery” so-called, consisting of, say, one hundred and fifty cells, generates an electric current which, by the wires stretched over the land on the familiar telegraph poles along the right of way, is distributed to many offices, rendering them intimately interconnected parts of one whole, really converting many offices instantly into one. In these offices are instruments for detecting and making known, also for producing, interruptions in the current transmitted through the wires stretched along the line. These instruments are: (1) a “switchboard,” or other appliance whereby the current is introduced into the office, or excluded, as may be required; (2) a “relay,” or instrument through which the interruptions in the current are repeated within the office and by which (3) another instrument, styled the “sounder,” and having as its special use the manifestation in sound of the interruptions of the main current, is governed; (4) a key or instrument for producing within the office interruptions in the current which are carried over the main wire to all other offices along the line; (5) a small battery generating a current controlling the sounder. Now communication is carried on by means of an “alphabet,”

consisting of various modes of interrupting the current, associated in denotation with the letters of the ordinary literal alphabet, ordinary words being telegraphically spelled out by means of the new alphabet. The whole telegraphic process is essentially simple, and is probably quite familiar to many. It is here described for the benefit of any who may be uninitiated as to the secret of it. Knowledge of telegraphy and skill in its use require a very considerable time and application of attention, as well as naturally apt intelligence. Telegraph operators as a class must be, and are, rather bright men, and from their ranks many eminent railway officials have arisen.

Telegraphy has in railway operations the following applications: (1) It is used in collecting information in regard to, and in distributing, equipment. Every station renders daily one or more telegraphic car reports, giving to an officer whose duty it is to distribute cars along the line — the train master or the dispatcher — information as to the number and kinds of cars on hand and cars needed for the business of the station. (The nature of this report will be discussed in considerable detail later.) Without this report, rendered regularly and promptly by telegraph, the chief business of the railway is very seriously hampered; for the orders of shippers for equipment cannot otherwise become known to the car distributor promptly, and consequently are not promptly filled, whence extreme dissatisfaction may result. Nothing is more worthy, or apt, to arouse the train master's or the dispatcher's ire than imperfect or false reports from stations regarding cars. In immediate

connection with the daily telegraphic car report is given a daily telegraphic weather report, or two such reports if the weather is unsettled or stormy. And here we may cite an illustration of the value of telegraphic service. From the telegraphic weather report the dispatcher, train master or superintendent judges as to the condition of the track and arranges various matters regarding train service most wisely accordingly. If the "wires are down," i.e., if the telegraphic service is interrupted, such provision cannot be made, of course. (2) Again, in the movement of trains telegraphy is applied with the most useful results. Information regarding trains is constantly collected telegraphically by the dispatchers, collated and applied in aiding and harmonizing as necessary the movements of trains. Conductors make reports of their operations as they proceed along the line, and these reports are at once given by the operator to the dispatcher for his use. (3) Certain special reports of various nature are rendered and special instructions issued by telegraph. The special instructions very often take the form of "train orders" so-called, which are absolutely definite and authoritative orders as to train movement. They are usually addressed to the conductors and engineers of trains, and are formally acknowledged by the conductor over his own signature. Before being signed they must be repeated to the dispatcher who issues them, and acknowledged as correct by him, and when finally signed by the conductor must be acknowledged "complete" by the dispatcher, the whole process being managed telegraphically. The orders are strictly timed as to their original reception,

their repetition and their completion: the acknowledgment or understanding is made absolute on all hands. Orders are of the following-named forms: (A) order fixing meeting points for opposing trains; (B) order directing a train to pass or run ahead of another train; (C) order giving a train the right over an opposing train; (D) order giving regular trains the right over a given train; (E) time order (order giving a train instructions to run behind time or to wait so many minutes, etc.); (F) order for sections (order for a train to run in two or more distinct parts or "sections"); (G) order for extra train (for a train running as an extra train); (H) order for work-extra; (J) holding order (issued to the operator, who must in accordance with it hold a train instead of allowing it to proceed); (K) order annulling a regular train; (L) order annulling an order; (M) order annulling part of an order; (P) order superseding an order or part of an order. For further information regarding the above forms the student must be referred to the Book of Rules and Regulations issued by the operative department of any and every American road. There are other forms, one of which is known as a "slow order," used in instructing trains to proceed cautiously over track in bad condition; another of which is a cautionary order relating to obstruction or to some defect in equipment, the oversight of which would be dangerous. It is the duty of the operator, whenever an order is to be issued, to notify the trainmen concerned, which he does by means of a certain signaling apparatus, known commonly as the "order board," a sheet of metal painted red (for use in daylight), or a red light

(for use at night), which is fixed in a conspicuous position near the track in front of or close by the station. This signal necessarily possesses an absolute character, and the operator's responsibility with reference to it is likewise absolute. Other signals, movable in kind, colored flags and lanterns, — *red* for *danger*, *green* for *caution*, *white* for *proceed* — may be used. Colored fusees are sometimes used. Signals imperfectly displayed, or absent from where they might be expected to be present, are treated as *stop* indications, according to the rule of safety. But further discussion of this topic will lead us too far from our subject. Enough, perhaps, has been said as to the application of telegraphy to the movement of trains. (3) We pass to its use in more general matters. And first, as regards communications that may be necessary relative to traffic matters, such as classifications, rates, routings, etc. Here the *necessity* of the telegraph is not so imperative as in the preceding applications, but is often great. There are many times when such matters cannot possibly be left to be handled by ordinary correspondence. If, for instance, a shipper, say of dressed poultry, must, in order to take advantage of the state of the market, have a rate on short notice, and the agent is obliged to obtain advice from traffic headquarters in order to be able to quote the proper rate, it becomes necessary for the agent to *wire* for the needed advice. Or, to take another illustration, if a hotel keeper must have at once a new cook and must "import" one, paying his fare to get him, the agent finds it necessary to telegraph an order that a ticket be furnished said cook at his starting point.

Many and various are the circumstances under which something of this sort is necessary. If a car of perishable goods cannot be delivered promptly on arrival at its destination — if the consigner is unknown, or if he refuses the car — it is imperative that the agent immediately *wire* the agent at the shipping point, and also the general claim agent, notifying them of all the circumstances in the case. A failure to use the wires or a failure in the telegraphic service from any cause would in such a case have the most serious consequences. The wires are very often employed in tracing the progress of shipments from their originating points to their destinations, for the purpose of expediting their movement and of establishing a record for advertising the company's service or for some other purpose. The convenience and efficiency of the wires for all sorts of uses is so fully recognized on all hands that it becomes necessary to restrict their use somewhat; and operator and agent are authorized to exercise a sort of censorship upon matter offered for telegraphic communication. Messages not absolutely requiring to be sent in order to serve a purpose of immediate importance may be refused; and all messages must be as succinctly framed as the nature of the case admits. If not so framed, messages may be revised, or a revision of them may be suggested to their authors. Such matters belong to the province of the operator. This fact suggests the importance of a certain critico-literary proficiency on the part of the operator.

In this connection it seems entirely pertinent to make an observation or two regarding the care necessary for the proper preparation of telegrams. As every word in

a telegraphic message must be literally spelled out as it is sent forward, telegraphic communication is in a sense rather slow and not expeditious. And this is all the more true in that on ordinary telegraphic wires only one message may be sent at a time along the whole length of the circuit. It is therefore necessary that telegraphic communications be as concise as possible, consistently with clearness. The composition of such communications is a thing requiring well-directed mental effort, positive literary skill. A message obscure in meaning and provoking another asking for an explanation is a blunder a *careless* writer may easily commit. In a series of messages referring to the same matter proper references — “file references,” as they are called — must be given in order to keep up the continuity of meaning. Messages intended for several persons at once have to be properly addressed and so framed that a common understanding is had by all concerned in the matter of the messages.

Following is a tolerably complete list of matters of which the operator in his peculiar function has charge: (1) Daily telegraphic weather and wire report; (2) report of the arrival and departure of trains, as shown by the conductor's train register; (3) daily (telegraphic) car report, as prepared by the car clerk; (4) daily foreign car report; (5) daily report of bad-order cars; (6) daily report of cars loaded within the last twenty-four hours; (7) conductors' delay reports; (8) conductors' “consists” of trains; (9) daily report of “coded” cars (cars handled as fast freight); (10) train orders and train-order signals; (11) daily telegraphic fuel reports;

(12) messages of all sorts; (13) the care of the local batteries.

In closing, a remark or two may be offered as to the new status of the telegraph in railway service. Eventually it may yield entirely to the telephone. It has already been extensively displaced; completely in some portions of the railway world, while in portions it is retained alongside the telephone, and in still others holds its wonted place. In certain conditions of the weather it appears to be somewhat more reliable than is the telephone. Those who advocate its entire displacement do so chiefly on two grounds apparently; viz., that it is less expeditious, and that it requires a certain technical skill which may be easily replaced by ordinary ability if the telephone be adopted in its stead.

CHAPTER IX

STATION RECORDS AND REPORTS OF EQUIPMENT

Interchange of Freight Equipment and Necessity of Records and Reports of Equipment — List of Records and Reports Required — Train Book — Yard Check — Record of Cars Forwarded, Received and on Hand — Record of Cars Ordered — Car Shortages — Daily Telegraphic Car Report Analyzed, Requires Much Care for its Preparation — Report of Cars on Hand, its Requirements and Uses, Causes of Inaccuracy in it — Demurrage and Prevention of Delay in Handling Equipment — Report of Cars Interchanged — Report of Foreign Equipment Switched, per diem Reclaim Statement — Differences in Car Reports on Different Lines, Changes in Them on the Same Lines, According to Varying Requirements.

AMONG the principal duties performed at the station are those of handling the equipment required for transportation and of keeping proper records and making proper reports thereof. Of passenger equipment, as we have already had occasion to state, little account is taken; of freight equipment, on the contrary, much is necessary. And it is a matter of some interest and importance to look into the reasons for this. It appears to have close relation to the natural development of the railway system. This development involves, and largely consists in, the extension of the territory over which transportation may be uninterruptedly carried on. In the earlier periods of transportation the different lines of road were so many separate and distinct individuals, having, and keeping to themselves, their own equipment. Later, roads were gradually merged into

larger lines of traffic, even when they maintained a certain separateness and individuality. This implied that their equipment, instead of being confined to their own rails, was allowed to go to foreign lines according to the exigencies of traffic in general; that is, an interchange of cars between lines became general, until at last it has become a sort of legal requirement, even though roads, especially in busy seasons, may require their agents to bill their cars going to foreign lines subject to transfer at junction points. And in fact it is easy to see that many commodities must be transported without transfer en route. Now, an elaborate system of car interchange, according to the requirements of traffic, necessarily involves an elaborate system of accounting as regards all classes of freight equipment, and even apart from all interchange, records and reports would be indispensable. At the station numerous records and reports are required, among which are the following: a train book, showing initials and numbers of cars received and forwarded in trains, together with the impressions of the seals attached to cars; a daily yard check, showing the car situation in the yard each day of the year; a general record of cars received, forwarded and remaining on hand; record of cars ordered by shippers; daily (telegraphic) report of cars loaded, loading, unloading, empty, wanted to load, etc.; special report of "foreign" cars (cars belonging to "other" lines) on hand; special report of bad-order cars; daily reports of cars forwarded and received; daily reports of cars interchanged; special reports rendered daily, semiweekly, or weekly, according as may be required by officials to

whom rendered, viz., division superintendent or train master; various incidental and special reports made, mostly by wire, to the dispatcher. Some of these records may well be discussed by us a little in detail.

The train book shows, besides the initials and numbers of cars received and forwarded in trains and their seals, the number and date of the trains, the names of the conductors in charge, the contents of cars and their destinations, all the items of information being gathered strictly at first hand as far as possible. This record is very convenient and necessary for a number of purposes besides the fundamental one of a mere record, — for tracing shipments, for obtaining data for “short,” “over” and “bad-order” reports, etc., matters that will receive proper explanation in due place.

The yard check is a record made by the yard clerk as he visits (daily, if possible) the various tracks in the yard, noting the contents of each. This record should show the locality of each car in the yard on any required date, giving any information of value as to dimension, capacity, contents or condition of cars, provided such information is not already contained in some other record. It is a record upon which traveling car-service inspectors are wont to depend considerably in their investigations at the station. From it data for other records may be obtained.

The record of cars forwarded, received and on hand has a purpose that is obvious. It should show not merely — as do the train books — cars handled in incoming and outgoing trains, but also cars received from and delivered to connecting lines at the station. The item

of cars on hand is always the difference between cars received and cars forwarded, account being also made, of course, of cars previously on hand.

The record of cars ordered by shippers fluctuates in its importance. In very dull seasons it may be almost forgotten, as it were. But in busy seasons the case is quite otherwise; the competition among shippers, the great danger of creating dissatisfaction among them by even the least appearance of inequality or unfairness of treatment (which is a thing expressly denounced by law), make it very necessary that the agent should see to it that the record is put into use and properly kept up. Shippers should be compelled to make their wants explicitly known and to accept services from the company strictly in the order and the manner called for by the nature of the requisitions made by them. The record should show the names of the shippers ordering cars, the dates of their orders, the exact kinds and capacities of cars ordered, the nature of the contents to be shipped, the destination of shipment; also the time when and the manner in which their orders are finally filled. In case a car differing in capacity from the one ordered is furnished — a larger for a smaller capacity — at the company's convenience, notation to that effect must be made in the record. No shipper should be allowed to order at one time more cars than he can use in one day. It is well enough — rather important, in fact — to have shippers sign the record or give a written order in some other form. It is obvious that among the shippers a spirit of rivalry and even jealousy is likely to arise. As it is in connection with the wants of shippers that “car

shortages," "car famines" so-called, become manifest, we may at the present juncture give some attention to such topics — to the meaning of a "car famine" to shippers as well as to the railway company. We will begin by supposing the existence, for example, of what is called a "bumper crop." The shipping season opens with numerous orders received by shippers for carloads of grain. Orders for cars are made to the agent in rapid succession, the record of cars ordered by shippers filling up rapidly. The cars in sight diminish as rapidly, and soon the visible supply is exhausted, the orders of the shippers for cars remaining unfilled. The agent makes full requisition each day (on his daily *telegraphic* car report; any other form of requisition would seem intolerably inadequate) upon the train master for cars, and impatiently awaits results. The results prove to be meager or even just *nil*; there are no cars to be had, at least for days to come. The customers of the would-be shippers, having been put off too long, push the shippers for the fulfillment of their orders and threaten to countermand orders if not summarily filled, and get their grain elsewhere. Growing anxious, and, it may be, sullen, the would-be shippers enter complaint with the agent against the company's service, blaming the agent as incompetent, and so reporting him, perhaps, to the division superintendent. This official, desiring to understand the situation, writes the agent, and a course of correspondence follows; but no satisfaction results to any one, and the state of tension and anxiety continues. Shippers gradually lose their orders, the company loses much of its business, and the station fails to score a record of good

earnings. Eventually, it may be, but not very soon, the situation eases up somewhat and business revives. But the fact remains that a "car shortage" or "car famine," with attending feverish anxiety and real misfortune, has occurred — a thing which no one who has had real experience of it in its virulent forms takes pleasure in witnessing. Quite obviously the car-order book faithfully kept up becomes a source of some comfort to the worried agent, as well as of advantage to his company, at such times; it serves as a sort of shield against the wrath of jealous and disappointed shippers.

The daily telegraphic car report is based on several leading distinctions, as follows: Loaded cars on hand to be moved; cars (system and foreign, shown separately) unloading or to unload; cars loading; cars (system and foreign) on hand empty; bad-order cars; cars moving in trains (east or west, north or south); total of cars at station and in trains; cars (system and foreign) wanted to load in the coming twenty-four hours; loads received from connecting lines, etc. If, now, with these distinctions we join the distinctions in equipment which have already been made, — into ordinary box, large box, furniture, vehicle, automobile, refrigerator, etc., — we form a set of designations which may be employed in making requisitions upon the train master for cars or in reporting to him cars on hand at the station. Thus we shall have: *box* cars, on hand to be moved, or unloading or to unload, or loading, or empty, etc.; *furniture* cars, on hand to be moved, unloading or to unload, loading, empty, etc.; and so on through the list. Taking together all the fundamental distinctions in *operation*

and all the distinctions in *kind* of equipment, we get a series of designations amounting in number to perhaps two hundred and fifty. Each company issues a printed form, consisting of all the leading possible combinations of kinds of equipment and kinds of handling, this form constituting the blank form of the daily (telegraphic) car report. In order to fit the form for telegraphic purposes, symbols (consisting of letters) are employed in place of words. Thus, box cars to be moved might be designated by *a*, stock cars by *b*, coal cars by *c*, etc., and similarly throughout the table. The table, however, would not be entirely symmetrical. In reporting empties, it would be very important to give the sizes (lengths) of cars in order that the train master or dispatcher might be properly informed as to the nature of the supply of cars available for filling orders along the line. Shippers of stock, for example, *generally*, it is true, prefer 36-foot stock cars, but sometimes 34-foot. Emigrants, not always but usually, want, for their goods and live stock, the largest box cars they can get, i.e., not 34-foot, but 40-foot cars if possible. In a word, different sizes and capacities are required for different uses. Particular care should be exercised also with reference to foreign cars, as they must as a rule be promptly unloaded, and when *reloaded* must be loaded in the direction of their home lines. This is a point which is carefully watched by the car distributors. Again, the cars which are special in their construction and use — furniture, vehicle, automobile, refrigerator, vegetable, etc. — require special care in their application, hence must be carefully reported. On the whole, the daily

telegraphic car report forms quite a considerable subject of study. Each day's report should be carefully and accurately prepared. The misuse of equipment that would be consequent upon careless or falsified reports would be something that could not be tolerated. The requisitions of shippers of cars could never be satisfactorily supplied by the car distributors if the information given them as to the supply of cars on hand were false or unreliable, nor could arrangements be successfully completed for trains to move along the line the cars that required to be moved. The necessity of accurateness in the daily telegraphic car reports cannot in the least be doubted, nor is there any room to deny that they should be regularly and promptly prepared and forwarded. And here we see again the importance of telegraph service in railway affairs. The data for the daily telegraphic report are found in the yard check and record of cars on hand.

A report of great importance in times of car stringency is the special daily report of cars on hand. This report should show the following items: initials of cars, the numbers of cars, the contents of loaded cars, the kind of cars, destination, date received, date unloaded, date reset for loading, delay, demurrage collected, date of billing of loaded cars, points at which foreign cars were received on the line, date of reception of them, causes of delay in unloading or forwarding. This is a rather elaborate form, and it is as important as it is elaborate. Operating officials may use it to good advantage in collecting information as to the use, proper or improper, that the agent makes or allows to be made of the com-

pany's equipment at the station. Copies are sent to the train master, the division superintendent, the car accountant, and even, sometimes, to the general superintendent. The last named official may from such reports learn not only what is done at individual stations with equipment, but how equipment is managed by his immediate subordinates, the division superintendents; and the standing which the agent will have with the superior officers in the matter of handling equipment will depend upon the character of the on-hand car reports rendered by him. The car accountant, who makes settlement with foreign lines for the use of their cars, will have an interest in the report and will frequently call for explanations if the report contains errors. The report, if not written regularly by the agent personally, should at least be watched by him, in order that its correctness may be insured. Inaccuracy may creep into the report in two or three ways, as follows: At the busy times of the month the checking of a large yard may be somewhat slighted for other work making urgent demands upon employees' time. In such case the on-hand report is made to depend too much on mere figuring or even guessing. Or, the testimony of others is too much relied upon. Such methods are apt to be defeated. Conductors may sometimes bring cars into the yard or may take cars out of the yard without making a report of the fact. A car loaded with coal, salt, oranges or other commodity might stand in the yard for several days unknown to any one, and might never be correctly reported, if the yard clerk depended too much on guessing or hearsay regarding the contents of the yard. Incoming and outgoing



trains must also be carefully checked and registered to keep the on-hand list straight. But it seems needless to dwell further upon this point. The items of delay on the part of shippers in unloading or loading of cars and of delay in returning homeward foreign cars have a peculiar importance, because a certain penalty is involved in such cases. On any car delayed by a shipper beyond a period of forty-eight hours a penalty (demurrage charge) of one dollar per day is assessed, and on all foreign cars a charge (per diem charge) of say thirty cents¹ is assessed by foreign lines for each day. The question of the prevention of delays is one of the agent's chronic problems. A rather rigid insistence upon demurrage rules seems advisable, except that it arouses the animosity of shippers somewhat, which it would be desirable to avoid if possible. Sometimes it may be possible to represent matters to shippers in such a light that they are persuaded to unload cars promptly and avoid the question of demurrage altogether. Whatever may be done in such a direction *should* be done, no doubt. Instead of waiting till the "free time" (the forty-eight hours) has elapsed before doing anything, the agent might do well to request shippers to unload cars at their earliest convenience and so secure the desired result, occasionally at least. Very often it is convenient enough for shippers to release cars promptly if they are only led to think of the matter rightly. It is generally the case that if demurrage really accrues, it is unwillingly paid; often, payment of it is refused. It seems better in all respects not to have it accrue.

¹ This charge has varied considerably in the past.

At junction stations there is required a daily report of cars interchanged between different lines. This is necessarily a double report, consisting of a statement of cars delivered to and cars received from connecting lines. The items of information called for by these reports are the following: initials of cars; numbers of cars; designation of cars as loaded or empty; date of delivery or of reception; point of origin of shipment and point billed from; point billed to and final destination. The reports are signed by the agents of the respective lines concerned and copies of them forwarded to the car accountant or car-service agent; copies are also furnished to connecting lines, a copy being retained for office record. Any — even the minutest — inaccuracy in these reports is at once noted by the car-service officials and must be corrected by the agent. Such reports being employed as the bases of settlement of per diem (rental) charges between lines, any inaccuracy is simply not tolerable.

In speaking of the report of cars on hand mention has been made of the special importance of reporting foreign cars on account of a charge consequent upon their use. A special report is necessary in case a road receives from a connecting line a foreign car to be delivered to a consignee located on its own track for unloading or for loading, or for both, the car to be returned to the delivering road. Three days, more or less according to a special agreement made between lines, are allowed to the line on which the consignee is located and receives the car, as *free* time against the charge that would have ordinarily to be assessed for the use of a foreign car. The road which is allowed the free time therefore makes a reclaim report,

styled "per diem reclaim statement," such a report being justified by the fact that the only revenue which the line actually delivering the car receives for its service (merely that for switching the car from the transfer track to the consignee's place of business on its track) is too small to warrant any real deduction from that revenue, for the use of the foreign car. The reclaim statement naturally presupposes that the line switching the car has, through the on-hand report, charged itself with the possession of the car for a certain number of days. If the number of days during which the car is actually held exceeds the number of days of "free time," "per diem" is paid on the car for the excess days. (If the number of days during which the car is held is *less* than the number of days free time, the line switching the car is gainer by so much). A complete "per diem" reclaim statement includes the following items: initials and number of car, date received, date returned, days on line, car service to be collected, contents of car, remarks explaining cause of delay, if any, or other matter.

On different roads, as one may naturally suppose, differences exist as to the kinds and forms of car records and car reports in use or required; and even on the same lines differences arise. One road may require a *distinct* report of foreign cars on hand, another includes foreign cars merely in the general on-hand car report. The like is true of bad-order cars. On some lines the daily report of cars received, forwarded, on hand, wanted to load, etc. (i.e. what we have called the daily telegraphic report) is forwarded by mail instead of telegraph, with the result of economy in the telegraph service. This may well

enough be done where trains carrying mails run frequently during the day. It very often happens that when changes of officials occur on a line corresponding changes occur in the variety of forms used, without, however, any real change necessarily in the substantial nature of forms. Again, changes are frequently made owing to changing requirements of business: reports required at a busy season might be allowed to lapse in their use during a dull season. Some discretion may properly be exercised by the agent in such cases. But in seasons of car stringency there is positively nothing to do but to make reports entirely full and correct. Every car must, if possible, be brought into requisition, or satisfactory reasons given as to why that is not possible.

CHAPTER X

STATION SWITCHING

Switching at Larger and at Smaller Stations — Agents' Authority as to Switching — Switch List, Necessity of Accuracy in its Preparation Must be Definite, Must not be Changed — Matters of Special Importance — Switching by Extras — Providing Billing for Cars to be Placed in Trains — Condition of Cars to be Placed in Trains — Make-up of Trains — Accidents in Switching — Switching of Passenger Equipment.

THE movement of equipment in the station yard, as distinguished from its movement in trains along the line between stations or into and out of stations, is known as station switching. The term "switching" is also applied to the handling of cars in transfer from one road to another, as occurs when one road brings in a car that must be delivered to a consignee located on another road. Of this sort of switching we are not here speaking. At large stations switching becomes a system of operations over an extensive and complex network of tracks, forming, as it were, a small railway of itself, and requires special supervision, conducted by a yard master or yard foreman according to instructions issued by the agent or a superintendent of terminals. At the smaller stations switching is done by ordinary train crews under the directions of the agent personally or of a yard clerk acting for him. Over switching operations the agent naturally would, generally speaking, have an authority corresponding to that of the train master or his immediate adjunct, the chief dispatcher, over the move-

ment of trains on the line. The agent leaves to the train crews the responsibility for the particular manner in which the operations ordered by him shall be conducted; but his authority is complete as to what those operations as necessitated by the exigencies of traffic shall be. Practically it is often necessary that there be issued by the dispatcher concerning switching operations, instructions as to the picking up of cars for which the agent has no use and which are needed at points along the line of the road. Such instructions may be incorporated with those of the agent or may be separate and additional to them. And they are to be complied with if possible, irrespectively of the time at which they may be received. The agent's instructions, once given, are, generally speaking, not supposed to be altered by addition or otherwise except for urgent reasons. Train crews have a right to expect of an agent that he shall study carefully the station's needs and know what he requires before issuing switching instructions. Therefore after a fixed moment at which, regularly, switching must begin and explicit instructions for switching must be in the hands of the train crew, those instructions are ordinarily not altered. Those instructions are contained in a formal document known as the switch list, of which a copy should be made by the agent or his yard clerk for the office records. Often the train master, in investigating the claims made by train crews as to the amount of time consumed by them in performing switching operations, requires to obtain from the agent just such information as the switch list alone would afford. In the course of such investigations it may

appear to the train master either that the train crews are not working efficiently in performing the operations ordered by the agent or that those operations themselves are faulty from the point of view of operative efficiency. In either case the authority of the train master may be brought to bear towards the making of a change for the benefit of the company's interests in general.

The purpose of switching is to handle equipment in the yard as traffic conditions require: to place cars properly for unloading, for loading, for forwarding, for transfer to connecting lines, for weighing, for storage, for cleaning, for undergoing repairs, etc. Cars must be moved, say from the passing track on which an incoming train may have left them temporarily, to the house track, the team track, the elevator track, the transfer track, or from the various tracks to the passing track on which is made up the outgoing train. The switch list is the explicit statement of all operations. It must be perfectly correct and clear and must be concise and to the point. Anything in the list requiring a superfluous or false move on the part of engine, engine men and trainmen — for all would be concerned together — would necessarily subject the agent to criticism. And of course if the agent noted that the switching were done in violation of his instructions, he too would have the right to criticize and complain as to inefficiency on the part of the switching crew, though he could hardly interfere overtly. For the proper preparation of switch lists it is obviously quite necessary that the various localities of the yard — the various tracks and the industrial establishments situated thereon — should have fixed

designations, understood by all concerned. It is easy to see what importance the daily yard check must have in the making up of the switch list; by means of it the yard clerk knows precisely the position of the "men" in the "game" he has to play. Experienced conductors or trainmen ordinarily perceive on a very slight inspection what the operations are that are required and are often able to offer to the agent valuable suggestions as to the constructing of the list. And of course any coöperation between the two forces which may lead to economy in the performance of switching operations is desirable. Indeed, harmonious relations in general between the station men and the trainmen should at all times be cultivated. Least of all things should the agent attempt a *display* of authority, though he must be firm in his requirements. In directing the movements necessary in the yard some points require very special attention. The house track must be taken care of most painstakingly; the amount of room on it is necessarily limited and must be carefully utilized. Of the transfer tracks also is this true. Any neglect may involve the agent in controversy with the connecting line, especially if the transfer track happen to be too small for the amount of traffic passing over it, and switching facilities happen to be rather insufficient, as may occur if there is no special switching crew or the number of crews doing switching is very small. Such a state as regards the transfer track leads to a delay, in any case, in returning to foreign lines cars switched for them, and especially if switching operations relating to the transfers are not constantly watched. A little matter apt to be neglected

by train crews in switching is that of leaving or replacing in their proper positions cars which it is necessary to disturb during switching operations. The switch list should be so made as to prevent this.

A question may sometimes arise as to what train crews may be called upon to perform switching. This will depend somewhat upon instructions which the train master or superintendent may issue. As a rule, extra train crews do not expect to be called upon to do any switching except such as is necessary for disposing of or for making up of their own trains. In case the agent thinks it imperative that they should do other switching he may request special authority for such switching from the train master's office or from the dispatcher. Train crews are, as a matter of course, very quick to detect any *unusual* or *irregular* demands made upon them, and do not willingly respond except upon properly authorized requisition.

With regard to cars that, in switching, are placed in trains to be forwarded, it is necessary that, in addition to the instructions contained in the switch list as to their destinations and contents, there should be given to the conductor billing authorizing and explaining the future disposition of the cars and their contents. Without such billing the conductor, generally speaking, has no authority for moving the car from the station. For loaded cars revenue billing is necessary; for empties, what is called a slip bill or running slip, showing where and when issued and destination of car, and if the car is a foreign car, the name of the road from which received and the point to which it is "home."

It should also be carefully seen to by the agent that the cars to be placed in trains for movement are in fit condition to move, otherwise the conductor will, if he understands his duties, not place the cars in the train. The car must be in good order and, if loaded, must be protected by proper seals, or proper cards if contents are of an inflammable, explosive or otherwise dangerous character. The manner in which cars shall stand in trains is at small terminals determined mostly by the conductors of trains; also the maximum amount of tonnage hauled. The latter point, however, should be taken into account by the agent, and yard clerk also, and in the making up of the switch list proper selection of cars must be made if more than the maximum tonnage of trains is on hand at stations to be moved. In figuring the tonnage of cars reference must frequently be made to the table of lightweights of cars, already explained. Another matter of importance is that of the number of cars in the train that are equipped with air brakes. A federal law requires that the percentage of cars with air-brake equipment shall be not less than seventy-five per cent.

In switching, accidents not infrequently occur whereby damage is done to the track or to buildings in the yard. The agent is expected to keep a record of all such occurrences and to report them to the offices of the train master and division superintendent. His testimony as a witness, or possible witness, in case of an investigation, would be of first importance, he being supposed to keep well informed as to what happens at and about the station. The agent is sometimes placed at a disadvan-

tage by the fact that trains often do their switching at night, when he may rightly be supposed to be taking a respite from his worries at the station. In such cases the agent must, as prudently as possible, learn all circumstances and be prepared to report thereon.

Of the switching of passenger equipment no account whatever has been taken in the foregoing paragraphs, as with the movement of that the agent has as a rule scarcely anything to do. At most he is required to know and report, perhaps, the numbers of the coaches hauled in the trains that run in and out of his station.

It will of course be understood that in the foregoing account of station switching we have had in mind smaller stations not the large terminal, transfer, distributing points at which fifteen to twenty gangs or crews of men, with engines, are engaged in analyzing trains and separating cars properly or on the contrary classifying cars and arranging them in trains according to the kinds and destinations of shipments.

CHAPTER XI

THE HANDLING OF FREIGHT AT THE STATION

What is Included in the Handling of Freight at the Station — Inspection and Preparation of Cars, Making Repairs, Cleaning Cars, Bedding, Airing, Disinfecting, etc. — Weighing Freight, Means and Methods, Freight Forwarded, Freight Received — Ingenuity and Skill in the Moving of Goods — Disposal of Freight in the Car — Checking of Freight in Loading and Unloading — Safe and Economical Unloading — Car-load Freight, by whom Handled — Supervision by Agent of the Handling of Freight — Goods that Should not be Rehandled.

THE treatment of this important topic — the handling of freight at the station — involves the discussion of the following: the preparation of cars for the reception of freight, the weighing of freight, the loading of it and the disposition of it in cars, the unloading of it and delivery to consignee or disposition of it in freight house, the inspection of freight as it is being weighed, loaded or unloaded.

Beginning with the preparation of cars, we note that inspection must be made of them with reference to their fitness for their contemplated uses. Such inspection would naturally have to be made before cars were "set" for loading, in case they were not already set. A *general* inspection of cars by the regular inspector might already have been made to decide whether or not cars should be placed on the bad-order list. The inspection now necessary is one having as its object to decide, as above stated, as to their fitness for given uses. This matter

has been touched upon previously but will bear a repeated mention. A car that might be wanted for grain could not safely be taken at random wherever it might be most convenient, say, of access; it must be in a certain condition, viz., tight and clean, a fact which would have to be ascertained by inspection. Again, such a car ought not, for lack of inspection, to be used for an ordinary merchandise shipment when perhaps it is needed for grain. When a shipper brings a consignment of flour to the station for forwarding, the agent or the car clerk would be taking a foolish risk if he, without knowing from inspection the condition of his cars, pointed to a car at random and directed the shipper to put the flour in it. The floor of the car might be covered with coal dust or with kerosene or grease, and damage might accrue to the shipment, giving rise to a claim, most likely. The requisite inspection need not, it is true, compel a special volition and act. It might be made incidentally, and yet accurately, by the yard clerk as he makes his daily round in the yard, but it requires to be made in some manner. If, on inspection, cars are found unfit for a contemplated purpose, it remains to render them fit, if possible, by repairs, or more commonly, perhaps, merely by cleaning. The car repairer is doubtless responsible for repairs necessary to put cars in general good order; but the agent can hardly avoid responsibility for some repairs of a very light nature. The assistance of the section men may be drawn into requisition for the heavier jobs of cleaning, as the cleaning out of stock cars, or of refrigerator cars which may need scrubbing, or other cars in which there is a thick

layer, it may be, of decayed vegetable matter, etc. When a refrigerator is needed for grain loading, the section men may be asked to clean ice out of the bunkers. The preparation of cars for the reception of freight may take the form of putting into them ice for refrigeration purposes, sand or manure for "bedding" purposes when stock is shipped, etc., or of making them fit for the transportation of explosives, inflammables, etc. Stock cars may require to be disinfected before using. Box cars, the floors of which cannot be properly cleaned, may be "prepared" for flour shipments, sugar shipments and the like by means of sheets of paper spread upon the floor or the use of clean sawdust or of grain doors or of loose lumber. Refrigerator cars may sometimes be "prepared" by the arrangement of their ventilators according to rules prescribed by the tariffs. At other times heaters are placed in them to prevent injury to perishable goods by freezing. We are at this point not concerned, of course, with the tariff prescriptions as such, but merely with the physical acts prescribed. But further details in regard to this topic are, perhaps, here unnecessary.

We pass now to the matter of weighing freight presented for shipment. It is especially made incumbent upon the forwarding agent by company regulations to weigh freight forwarded. The reasons for this will be discussed somewhat hereafter. Assuming here that a railway cannot logically nor with safety leave the weighing of freight wholly to shippers, we will consider the means and methods of weighing. If freight is loaded through the freight house, as seems proper, it may be

passed over the scales which are set in the floor of the house, and, generally speaking, it should not be accepted for shipment unless this can be done. Freight brought to the station too late for this should be refused or held over for the following train. If freight is not weighed at the forwarding station, the chances of its getting weighed at all are rather slender, as the delivering agent has abundant "troubles of his own." Weighing becomes unnecessary in the case of goods for which the classification specifies "estimated" weights, or of goods which have often virtually been weighed, or in case shipper's weights speak for themselves and may be taken unquestionably as correct. The weighing of very heavy or bulky objects is sometimes a matter of extreme difficulty, almost impracticable. To accomplish it, the entire station force may have to be called into requisition, and perhaps other persons besides. But the temptations to neglect weighing that frequently arise, cannot consistently be surrendered to by the forwarding agent. He is positively bound to make every effort to ascertain the actual weight of what he accepts for shipment. In the event of his being unable to weigh a shipment it remains for him to give notice of the fact — by means of a notation to that effect on the billing — to the agent at destination. To the weighing of freight that is received for delivery much less importance is, generally speaking, attached than to the weighing of freight to be forwarded, in accordance with the recognized rule that freight must be weighed at forwarding stations. As this rule, unfortunately, is often not properly observed, some stations, especially the largest, weigh incoming

freight with (it is stated) advantageous results — a claimed saving of as much as eighteen per cent of earnings. Nevertheless, there are reasons for not weighing freight at destination. The weight at forwarding stations would generally be more correct on account of more or less shrinkage en route, as a result of handling. Again, goods should be handled as little as possible, because of risk of damage resulting therefrom. This is particularly true, naturally, of fragile and of perishable goods. At small stations, where the force for handling heavy and bulky shipments is apt to be inadequate, goods cannot well be weighed and rehandled, but may easily be turned directly over to consignees without weighing and rehandling, so far as the station force is concerned. The weighing of freight known not to have been weighed at the forwarding station is of course unavoidable.

The efficient handling of freight is not a matter of mere main strength; there is considerable room in the business for the exercise of ingenuity and skill in the management of tools and appliances and in the taking advantage of natural forces. In speaking of freight-house equipment certain tools have been mentioned (p. 51, above). At some of the very large stations there may be in operation, in the near future, if such is not already the case, elaborate machinery — tracks, vehicles, cranes, etc. — for handling freight; miniature railway systems, as it were, within the walls of the station warehouse. The small station at which much freight is handled is relatively at a disadvantage in this regard. Still, with proper exercise of reflection and ingenuity much might be accomplished which is ordi-

narily not thought of. With a pair of rollers, a crow-bar and a few blocks, a single person may perhaps manage comfortably a box, say, of nursery stock weighing from 500 to 750 pounds. A piano may sometimes be moved on a truck or on rollers by two men. By placing rollers or blocks under its center of gravity a shipment otherwise moved with difficulty may, sometimes, easily be shifted and placed in any desired position on the car floor. By a skillful handler a heavy box may be raised from the floor to the roof of a car by being moved upwards on a series of boxes properly arranged, say, terrace-wise. A four-hundred-pound barrel of alcohol or of oil is easily set on end by being set to vibrating, as it were. There seem to be various ways of sometimes making merely mechanical objects handle themselves, so to say; giving them a quasi-dynamic character, without, it should be added, throwing them or letting them fall or tumble or roll at random. Now in "loading" freight, or placing it in the car, it is necessary that the handler should know beforehand, in a general way, what disposition is to be made of it in the car. To this end the car is partitioned mentally or by designations in chalk, into separate spaces for distinct shipments or groups of shipments, as required by the different destinations of the shipments, the spaces being arranged according to the order in which shipments must be unloaded from the car in its progress along the line. (This may not always be necessary or of any advantage.) All this is generally necessary to prevent utter confusion in transportation and the defeat of its proper end. If, in loading, shipments are placed in improper spaces or their

parts are separated from one another, there necessarily occur errors in handling which involve the miscarriage of freight, delays in delivery, and even entire loss of freight, with consequent dissatisfaction and claims for damages. Again, regard must be had to the different weights, bulks and conditions of objects loaded. Coarse and heavy freights must be loaded upon the floor of the car, and not on top of other freight which may be light and fragile. Bulky objects seem to require to be disposed of before smaller ones. Perishable and fragile goods must be handled with special care, no risks being taken. Dirty and contaminative freight must be loaded separately from other classes which it might injure. Turpentine should not be loaded in close proximity to, or perhaps in the same car with, butter and cheese. Fine dress goods should not be placed in a damp car. Green hides, empty oil barrels, empty chicken coops and the like should be put into a "dirty" car. Finally, a car should be loaded to be set out at a station if there is enough freight for it, say four thousand pounds or more. In unloading freight, in addition to the task of the mere handling of it, is also that of accurately "checking" it to see that it tallies as to quantity, kind and condition with its billing. The necessity of this is not so seriously felt, though it is very important, in connection with the freight forwarded, since the forwarding agent is not made primarily responsible for the charges assessed on freight. In case freight received is shown not to have been weighed it must, as has been stated, be weighed before delivery; otherwise it may be directly delivered to the consignee, he or his representative assisting in

handling it when delivered. In order to dispose promptly of freight received, the agent may sometimes be tempted to unload heavy or bulky freight without the proper assistance — with unfortunate results perhaps. It is better, no doubt, to delay a little the delivery of freight than to be too much in haste to get rid of it. If, for example, there is a large crate of plate glass to be handled, it should, unless there be danger that the car may get switched and bumped about, be allowed to remain there until all arrangements can be made (assistance of section men be secured, perhaps) for the safe and proper handling of it. On the contrary, it might be a mistake to allow freight received to remain in the car to become damaged, pilfered, or stolen outright, instead of unloading it and placing it in the freight house. Economy of labor, however, results from leaving freight in the cars as long as may properly be done, since it often obviates the necessity of a rehandling. This arrangement is often rendered impossible by the (vexatious) dilatoriness of consignees or their representatives — draymen — in taking their freight away from the station, so that the placing of it in the freight house becomes necessary.

In the handling of freight, whether in loading or unloading, a continual inspection must be practiced; and it is necessary that the warehousemen should have a sufficient knowledge of classification requirements to make inspection according to rule. (The present is of course not the place to discuss these requirements as such.) The classes of goods shipped, their condition, their modes of packing, their quantity, marking, etc.,

must be studied in the process of handling, or they will not be properly studied and known at all. Without such inspection any really adequate assessment of charges becomes impossible, as does also any really satisfactory account of the goods in case such should be needed in the investigation of a claim arising because of loss or damage. That proper records should be kept of the results of inspection needs hardly to be stated. These will be discussed later, when "shorts," "overs" and "bad orders" are presented for consideration.

What has thus far been said in regard to the handling of freight has been said primarily with reference to less-than-carload freight. Carload freight, in fact, is, according to a recognized rule, handled, not by the station force, but by shippers themselves. It is weighed by the company on its track scales at the station, or somewhere en route. It may, by way of precaution, be inspected by the agent when loaded or unloaded, to such an extent as to prevent the violation, on the part of shippers, of the company's published rules. To a considerable extent, however, inspection is waived by the company and notation to that effect is made in some form or other on the billing of shipments. But this point will be further discussed on a later occasion.

A further point requires mention. The handling of freight should not be left by the agent entirely to the other employees. It is a matter that is in no sense beneath the dignity of his position. It is, on the contrary, a matter of the highest importance. Quite possible is it that the purpose for which the railway as a transportation system exists may, notwithstanding all

preparations in the form of equipment of the greatest efficiency in itself and the handling of it, as well as of classifications and rates of the most advantageous nature, be largely vitiated, if not defeated, by the mis-handling of freight at stations. The agent, therefore, may well be expected to keep in touch with what is done at the freight house and the freight house platforms, even if he takes little active part in the performance of it.

We may close our discussion of the handling of freight at stations by appending a list of the classes of goods which it is generally not considered practicable to re-handle at transfer points when shipped in carloads: agricultural implements, automobiles, bulk salt, carboys, cast- or wrought-iron pipes, cement in paper sacks, cider, beer and ale in wood, cooperage, drain tile, dressed lumber, earthenware or stoneware in bulk, fine machinery, flour in cotton or paper sacks, furniture and show-cases, glass in bulk, plate glass, green fruit, grindstones, hard or soft coal, lime, marble, oil in barrels, paper, perishable freight, plaster in paper sacks, powder or other explosives, roofing slate or brick, sewer pipe, steel in shape, stoves and fine castings, telegraph poles, long timbers, lumber, wagons, carriages of all kinds, etc. The reasons for the assumed nontransferableness of such goods are not difficult to discover in the nature of the goods themselves.

CHAPTER XII

THE SEALING OF CARS

The Real Nature and Significance of Car Seals — Physical Character of Seals — Different Modes of Applying Seals to Cars — What Cars Must be Sealed, Exceptions — Criteria of Proper Sealing and of Seal Records — Legal Protection of Seals.

It is a rule practiced by railway companies in general that cars containing freight to be moved must be sealed, must have their doors fastened, or, rather, protected against being unlawfully opened, by means of seals. The matter of seals is one concerning not merely the operative aspect but also the traffic and the accounting aspects of transportation. Here we shall deal with it mainly in the first-named aspect. We may say at this point that the protection afforded by the seal is not regarded in the light of a merely physical one, as the protection furnished, for instance, by a padlock would be. The protection is of an immaterial or ideal nature, chiefly, in that the principal use of the seal is to furnish a means of establishing a sort of record of the handling or movement of goods transported. A shipment, to be properly handled, must, if it be possible, be transported from point of origin to destination under an identical seal or under a "continuous seal record;" any interruption of the record must have a sufficient reason or explanation, otherwise a mishandling of the shipment may be recorded.

As a means of mere *physical* protection seals as gen-

erally made are practically useless. Seals are commonly mere strips of tin or pieces of wire with disks of soft metal attached to them, capable of taking an impression from a sealing iron, as wax does from an office seal. Sometimes, however, the sealing iron and the soft metal are dispensed with and seals are used which are, as it were, self-fastening and which have an impression, consisting of letters, or letters and figures, stamped or painted upon them. Of the impression, however made, a record is kept, and herein lie the secret and value of the seal. Each station is represented by a peculiar or separate impression. Whenever the record becomes discontinuous, then the seal is known to have been broken and the car to which it is attached is presumed to have been opened. Investigation may reveal just where, when, by whom, and why car was opened, and so locate responsibility, which, but for the seal, would be undiscoverable. Suppose, for concrete illustration, that car 27015, loaded with grain, leaves station "Xenia" bearing on all its doors seals with the impression "X," and is billed to the station "Brownville" on a "foreign" line, and that, when it arrives at destination, a seal on one of the doors is found to be not "X" but "F." The necessary inference is that the car has been opened en route. If part of its contents be found missing and a claim of "shortage" is made, then the new seal impression "F" furnishes a clue for investigation to work upon. The station whose proper seal-impression is "F" is located, and upon the road on which it is situated it especially devolves to investigate the cause of the shortage and, it may be, to assume responsibility for it. In case the

car has reached destination protected by the original seal, and yet a shortage is found at destination, the necessary inference is that the transportation companies are not to blame for it, unless it can be clearly proved that the shortage occurred through some defect in the car in which the grain was shipped. The foregoing illustration is one that applies to instances of frequent occurrence.

The manner of applying seals to cars varies almost indefinitely, depending mostly on differences in ordinary car door fastenings. Some fastenings are so constructed that there is, quite obviously, only one way in which a seal of any sort may be applied to them; others admit of seals being applied in more than one way, only one of which, however, may be called correct; while others still may be sealed satisfactorily in more than one way. No rule, therefore, can be laid down as to the proper application of seals in some particular manner; each case must be decided on its merits, according to the kind of seal, the kind of door fastening or other condition. The private seals of shippers are accepted in lieu of the ordinary company seal.

As above stated, every loaded car must be sealed (see exceptions mentioned below); a record must be made of the seal impression. Loaded cars cannot be moved, are not permissibly handled by conductors in their trains, unless they are sealed. Every loaded car that is emptied at a station bears, before it is emptied, a seal which must be broken by the agent or his assistant and by no one else (see exception below), a record being made at the time of the breaking of the seal impression. This is a requirement universally insisted upon and

with reason. By some roads it is even required that specific account be made of every individual seal furnished an agent, almost as if it were a passenger ticket. A few classes of loaded cars are *usually* left unsealed (although some lines, it would appear, require all classes of loads to be sealed), namely: cars loaded with horses, mules, cattle, sand, gravel, clay, soft coal, ties, cinders, stone, wood, rails, rip-rap, etc.

According to rules laid down by the Freight-Claim Association imperfect sealing of cars occurs, if (a) there is an absence of seal, (b) seal is improperly applied, (c) seal is broken, (d) impression is indistinct, (e) seal is without impression, i.e. blank, (f) seal is on an insecure car door fastening. Seal records are imperfect if (a) record is entirely wanting, (b) there is no record of marks or impressions, (c) there is no record given by conductor of seals at a station where there is no agent. The opening of a car in error must be regarded as an interruption in a continuous record unless an affidavit as to the manner of the opening is made by the employee opening the car in error. An end door of a car need not be sealed outside if securely fastened by a cleat or otherwise on the inside. The record of the seals on the ventilators on refrigerator cars in local trade need not be continuous or complete provided that the record of seals on the doors is continuous and complete.

It remains to state that the car seal is protected by law in that the unauthorized breaking of seals is a penal offense, and that seals on cars containing bonded goods may be broken only by a United States custom officer, the agent having in this instance no authority.

CHAPTER XIII

THE SERVICE OF ATTENDING ON TRAINS

Calling of Crews, Regular, Extra — Forwarding a Train of Live Stock — Acceptance of Train from Connecting Line — Preparation of Billing — Getting Check of Train — Getting Running Orders — Inspecting Stock — Executing Live-stock Contract and Necessary Release — Trains Having Perishable Freight — Ordinary Freight Trains — Passenger Trains — Inexperience and Simplicity of Many Passengers — Necessity of Exercise of Patience and Courtesy on Part of Station Men — Handling of Baggage — Unreasonableness of Much of Baggage So-called — Frequent Necessity of Haste in Handling Baggage — Handling United States Mails — Mail Delays and Shortages.

WE have already, in treating of switching, spoken of the making up of trains by the train crews, also the necessity of the agent's furnishing the conductor with billing and with instructions from the train dispatcher, giving the necessary information and authority for the movement of the train with its contents. Train orders giving directions as to *how* trains move have also been discussed. It will be of some interest and value, perhaps, to illustrate in detail matters connected with the getting a train ready for movement. Theoretically train crews are *called* for duty, beginning at a certain moment of time: must be called for such duty one hour before time of commencing work. Of these two points of time the dispatcher requires to be informed (by the operator), since he must have a record of the time on duty of all train crews. This is especially necessary inas-

much as federal law fixes a maximum limit for the time on duty of all train crews. The calling of train crews for duty devolves, at small terminals, generally upon some member of the station force, as the yard master or night operator, if there be one, or possibly the helper. In relation to the crews of regular trains the duty is mostly a formal one, if such trains begin work in broad daylight; if not, they must actually be called. Crews that do not require to be called simply go to work as a matter of course at a certain time fixed, as a rule, by the train master, who is generally careful to see that the expense of switching or making up trains at stations is kept down to the minimum, for in switching or making up trains, as in other matters, "time is money." (At the larger stations, as we have seen, switching is done by special crews assigned to the work, while at the smaller each train crew makes up its own train.) The agent, too, has to take note of the time at which crews actually begin work and of the time spent in doing work. He will, probably, be called on to "O.K." or approve the reports rendered by train crews to the train master of the time spent in switching. Extra trains, or "extras," as they are styled, — i.e. trains that are not scheduled but are moved by special orders, — require somewhat special attention as regards the above-mentioned matters. Their time for going to work may, very likely, be 3 A.M., and attendance upon them may require strenuous service sometimes. We will, for illustration's sake, suppose that at a junction station a trainload — say twenty-five cars — of cattle arrives on one line to be delivered to another and forwarded by it. The train

is reported due to arrive at 1.30 A.M. This information is furnished as advance information early in the previous evening. As there is, we will suppose, no night force on duty at the station, the agent and other station men set their alarm clocks for 1 A.M., and are on hand ready for work by the time the train should arrive. The yardman was up at 12.30 calling crews. Owing to a "slippery rail," a "hot box," or a "leaky flue," the reported train fails to "make time" and arrives at 3 A.M. Arrangements are made as expeditiously as possible for receiving the train from the connecting line over the transfer. The engine crew has been called by the roundhouse foreman or some of his men and engines have been ready and waiting since 1.30 A.M. Train crew and engine crew get together and proceed to remove the trainload of cattle from the transfer and get ready for starting, the cars having been inspected before being accepted from the connecting line. While the train is being gotten ready, the agent and his assistants, say the operator (for the agent is not allowed to do the telegraphing and so dispense with the service of the operator for the time being) and the yard clerk, attend to other important matters connected with or necessary to the movement of the train. Agent and operator "get busy" and make the twenty-five waybills which must accompany the stock, or else merely register certain bills from the connecting line and stamp them to indicate time and place of transfer; the yard clerk takes a check of the train, making a correct list of the numbers and initials of the cars in which the stock is to go forward; he also prepares stock contracts to be

executed by the agent and the men in charge of the stock, jointly. The operator gets into communication with the dispatcher, gives him necessary information as to the nature of the shipment about to move, as to its destination, as to points at which the cattle must feed en route, as to when stock was last loaded, as to the name of the conductor in charge of the train, the number of the engine hauling it, etc., and in turn receives, at the end of a few moments needed by the dispatcher to make necessary calculations, a train order directing the movement of the train, which, according to our supposition, is an extra. While the operator is at work the agent makes a personal inspection of the general condition of the shipment, converses with the men in charge of the stock, learning their wants and their opinions as to the condition of the stock, and signs the contracts with the men. The conductor meanwhile gets possession of the bills, examines them and compares them with the check he has just made of the train he is to handle, and if he finds no discrepancy, accepts them and registers them in his train book and is then ready for his orders. These he receives from the operator, reads them aloud and signs them, waits for the operator to get the final "O.K." from the dispatcher and prepares meantime the "detail" or "consist" of his train which the operator must give by wire, immediately, to the dispatcher. When the orders are finally ready the conductor takes them and, placing the necessary record of his departure on the train register, goes out to his train, gives the engineer a copy of the train order and orders him to "let her go," i.e. open the throttle and begin the "run" with the stock. If the agent finds

that the condition of the stock was not entirely satisfactory, he makes on his records certain memoranda as to its condition, which may be of use should any claim be entered by the shippers for damages. Of course, if the condition of the shipment were too bad he would communicate at once with the dispatcher, informing him of the facts in the case and awaiting advice from him as to its acceptance or nonacceptance from the connecting line. If the shipment were not fit to move forward, the dispatcher would decide not to assume the responsibility of moving it. If when the shipment were received a bad-order car were discovered in it, making necessary some repairs or perhaps a transfer of its contents to another car, and consequently a delay, full explanations would have to be made to the dispatcher of all circumstances in the case. Every part of the entire transaction becomes a matter of detailed record for purposes of future investigation in case of need. If in the transfer and forwarding of the stock everything goes smoothly, the transaction may be completed within an hour, perhaps, after the stock arrives. But such a case is not altogether common; there are apt to be miscarriages and delays, and it may easily be daylight when the agent and his men get to bed again to finish their night's rest. Stock extras, it is scarcely necessary to say, require special attention; service connected with other classes of trains is less strenuous, but is also less interesting and instructive. The great susceptibility of live stock to damage if improperly handled, and its close relation to human interest and welfare in general, render the handling of it a matter of very serious import. Next to it

in this respect are perishable goods, such as fresh meats, fresh fruits and vegetables, etc. If in a season of warm weather, say, the conductor of an approaching freight train wires the agent that he has a carload of meat for the station or some point beyond, this means to the agent that he must be on hand at the station when the meat arrives, whether the time be day or night, must inspect the condition of the ice bunkers of the car, and, if necessary, have them filled to full capacity with ice, and make proper billing for the car, and a record of what he has done for the shipment, the value of which is some thousands of dollars, most likely. In zero weather the agent would have to see to it that a car of potatoes, say, was protected from freezing by being housed (i.e. placed in the roundhouse) while in his care. Similar special care would have to be bestowed upon other kinds of perishable stuff. Ordinary freight trains cause no particular anxiety as a rule. At a way station the agent is on hand at train time to receive his freight and its billing from the conductor and in turn to give to the conductor what he has for him. At the terminal the conductor sets his train away and puts the bills in the bill box, and the agent is not necessarily needed or expected at train time.

The attendance on passenger trains is, on the whole, less exacting than that on freight trains. Of it it is not necessary to speak here in such detail, inasmuch as something has already been said regarding it and, besides, every person from his own experience in traveling has a certain degree of knowledge of it. Every one has observed the beautiful system and efficiency of service

performed at the large stations in cities where multitudes of people are safely and comfortably handled almost every hour of the day. All the more may one be pardoned if he makes mention of the little trials which the agent at a smaller station undergoes in dealing with people who, unlike the city folk, do not ride every day, travel only occasionally, and are lacking somewhat in the intelligence which is acquired by an experienced traveler. At such a station many grown people manifest a childish simplicity which is at once annoying and amusing. Often the would-be traveler knows merely the name of the state and county in which his destination may be located; he has never thought to make a little study as to how to get there. And the agent, when he should be taking care of a dozen other passengers, finds himself totally engrossed by the necessity of having to do for the seemingly witless passenger the thinking and investigating which said passenger should have tried to do for himself. The most trying passenger to deal with is probably the man whose fondness for stimulants, or perhaps sedatives, causes him to keep his intellectual condition such a dazed or crepuscular one that he can only with difficulty make known even the name of the place he wishes to reach by train. A multitude of little things there are that render very necessary the cultivation on the part of the station man of a certain quality of manner continually extolled and insisted upon, viz. ordinary politeness or courtesy. Some of the correspondence schools of the country would, perhaps, win credit, one might pardonably suggest, if they would advertise and conduct, for the benefit of possible travelers,

courses of instruction as to how to plan a journey, how to get to the depot in time, how to buy a ticket and get baggage checked and the like. But, jesting aside, one may justifiably remark that while agents often fall short in the knowledge and ability necessary for the efficient discharge of their duties towards passengers, passengers, on their side, often fail to attend to even the least of the duties belonging to one who wishes to travel.

In this connection we may speak especially of the handling of baggage as a matter in regard to which station men, as well as train baggagemen, are conspicuously open to criticism. The temptation to throw or drop baggage instead of really and properly handling it is frequent, and is frequently yielded to. Much "baggage" is unreasonably bulky or heavy or unwieldy for other reasons; much of it is not in reality baggage at all, but freight, given the (questionable) appearance of baggage — property belonging to a class of ignorant travelers, or to a class of self-complacent travelers who think it right to call anything baggage which they may happen to be inclined to have with them, whether necessary or not, when they travel; travelers who have no appreciation of the great liberality of American (as compared, say, with foreign) railways in the matter of baggage allowances. Now it is hardly to be expected that baggagemen should be altogether deceived as to the real character of such so-called baggage or that they should feel respect enough for it to give it a considerate handling, although it be *personal* in its relations; hence the "baggage-smashing" so much complained of. From another point of view, also, baggagemen are not altogether to

blame. In times when travel is heavy and the amount of baggage large, great haste in the handling of baggage is encouraged by the fact that trains are obliged to make their schedule time as nearly as possible. Anxious train masters sometimes contrive, intentionally or unintentionally, to impress conductors with the fact that trains must not be delayed or that delays must in all cases be strictly accounted for. Now it is much more convenient for conductors to hurry their baggagemen than to be conducting continual correspondence — a great bugbear in the railway business — with the train master's office. The baggagemen under pressure hurry often, if not habitually, and they eventually, it may be, form the habit of hurrying indiscriminately; hence, indiscriminate baggage-smashing. However, there is a right way to handle baggage, which should steadily be put forward as the standard by which baggagemen are to be judged and should judge themselves. Care and discrimination must be used in this matter as in all others connected with station service. Even on days when travel is heavy — say excursion days, when land-seekers flock to the station with their numerous pieces of baggage — baggage must be, and at a well-ordered station is, loaded without damage. Instead of waiting till the last minute before the train's departure to load baggage, the baggageman begins, as soon as there is a truckful, to put baggage into the car and so finds time to take care comfortably of two or three truckfuls before leaving-time. He finds himself in trouble, however, when a number of dilatory passengers arrive just as the train is about ready to pull out and demand to have their baggage checked.

Through no fault of his, proper service gives way to improper; baggage must be hustled, and it gets damaged. Here again the passenger is of course to blame. The baggageman could not, even if he would, treat baggage respectfully.

One part of the service connected with attending on passenger trains is that of handling United States mails; that is, in case the handling devolves upon the railway company instead of the United States Government. The railway company handles the mail whenever the distance between the depot, on the one hand, and the post office or other depots is 1320 feet or less; otherwise the mail is handled by the government. The kinds of mail matter handled are three, as follows: (1) pouches containing first-class mail matter; (2) tie-sacks containing other mail matter; (3) empty mail sacks. Mail to be forwarded must be delivered at the depot for forwarding at thirty minutes before the leaving time of trains; and mail received must be delivered at the post office within thirty minutes after arrival, if practicable, or to connecting lines in time to make the earliest connections possible. In case mail to be forwarded or to be delivered is "short," explanation must be made of the nature and cause of the shortage—mail shortage notice. An unexcused failure in handling the mails is punished by a fine. (Fines are imposed also for damaging a pouch or allowing it to be rifled.) A record must be kept of all pouches handled.

CHAPTER XIV

STATION AND TRAFFIC DEPARTMENT—FREIGHT TRAFFIC—FREIGHT CLASSIFICATION

Traffic Department Officials — Distinction Between Freight and Passenger Traffic — What Constitutes Freight — Freight Classification — Importance of a Knowledge of *Principles* as well as Rules of Classification — Terms Denoting Kinds of Freight — Explanations — Leading Principles of Freight Classification — Illustrative Examples — Commodities not Listed in the Classification Catalogues — Special Commodities — Use of Principle of Analogy in Classification — Historical Aspect of Classification.

TRAFFIC is concerned with persons and property and the charges for transporting them. The traffic officials with whom the agent has especially to do are the general freight agent and his assistants, the division freight agent and the traveling freight agent, the general passenger agent and ticket agent and his assistants, the traveling passenger agent. The freight traffic manager and the passenger traffic manager only occasionally communicate directly with the ordinary agent.

The distinction between freight traffic and passenger corresponds pretty literally with that between persons and property, as above indicated. If, to be somewhat more exact, one says that passenger traffic has to do exclusively with persons (including corpses), their baggage, and certain pet animals, then freight traffic will have to handle every other class of transportable things, with the exception of certain specifiable ones. Of course there

are innumerable classes of things which no one would think of describing as transportable, or therefore as freight, e.g. a "skyscraper," or even an ordinary building of almost any kind. With such things we are not here concerned at all: they are not properly describable as *movable*, still less *transportable*. But there are many things which are movable which, for one reason or another, are not transportable as ordinary railway freight. These cannot well be particularized until the conditions have been discussed under which things are accepted as freight or not. By way of partial indication it may here be stated that things of an intimately personal nature or quality, gold and silver articles, things of exceeding value, valuable papers, things of exceeding fragility, perishableness, dangerousness, etc., are excluded from freight. It is of course of very great importance that the transportable things which are not freight should be specified as nearly as possible; but of this later.

In treating of freight traffic in general we shall have to discuss, partially at least, such topics as the following: the kinds of freight or freight classification, weights, freight tariffs, rates and charges, regular and miscellaneous, the acceptance and forwarding of freight, the reception and delivery of freight, certain freight records and reports, and certain miscellaneous topics. We will begin with the topic of classification.

We note first, that as a matter of course it cannot be expected that this topic should be exhaustively treated in a work dealing merely with station operations. The station agent has not to frame and explain classifications

in general, but rather to apply to particular things offered to him for transportation the rules of classification laid down by others having classification as such or in general as the special matter of their care and consideration. Nevertheless it appears inconceivable that an intelligent and self-respecting agent can think of himself as a *mere instrument* or *tool*, one may say, of another's thought; and it is desirable here to look a little into *principles* as well as mere rules. There are practical necessities for this. Without it the agent will work more or less in darkness, confusion, and dissatisfaction to himself and others. There are times when he needs to be able to explain, to intelligent and inquiring shippers, something of the principles by which he is governed in his dealings with them. If he cannot do this, his efficiency may be questioned, and the company he represents may be distrusted and condemned for strange and unfair dealing. Much better were it if the agent were competent to show the rationality of what he is called upon to do in dealing with his patrons. But of this there will be occasion to speak again hereafter. To denote kinds of freight, numerous terms are in use as follows: (1) live stock, perishable freight, dead freight, time freight, red-ball freight, dangerous freight, dirty freight, light and bulky freight, bonded freight, government freight; (2) carload freight (c. l. freight), less-than-carload (l. c. l.) freight, merchandise, commodity, straight carload freight, mixed carload freight; (3) bulk freight, loose freight, freight nested, package freight, freight in boxes, freight in crates, in racks, in bundles, in bales, freight set up, freight knocked down; (4) freight in the rough, in the

white, finished; (5) freight released, at owner's risk of freezing, breaking, leaking, chafing, etc., freight prepaid, guaranteed, straight freight, shipper's order freight, shipper's load and count (S. L. and C.); (6) first-class freight, second-class, third-class, fourth-class, fifth-class. Classes A, B, C, D, E, and $1\frac{1}{2}$, 2, $2\frac{1}{2}$, 3, $3\frac{1}{2}$, 4 times first-class freight. Generally speaking, these terms are tolerably plain in meaning, and definitions need not be attempted. By practical experience with the objects denoted by them their meanings become quite clear. A few explanations will, however, not be out of place. "Dead freight" means, in the first instance, any freight, naturally, that is *not* live stock, but is practically restricted to a narrower class, excluding perishable freight, time freight, red-ball freight, and other classes of car-load freight requiring very special handling. "Time freight" and "red-ball" freight are varieties of fast freight or freight the movement of which must be expedited. Freight "set up" is freight the parts of which (say of a machine) are put together; freight "knocked down" is the opposite. Freight "in the white" comprises manufactured stuff in which the process of finishing is not yet begun. Shipper's "order freight" is freight which is deliverable only on presentation of a bill of lading, possession of which consignee obtains only on payment of a draft attached by shipper. The terms as given above are grouped (roughly) according to differences of quality, quantity, manner of aggregating, state of manufacture, condition under which accepted, traffic rank. Some of the terms are primarily operative designations; others are purely traffic in their denotation; still others

appear to be of a mixed character in this regard. It is necessary to consider a little the underlying principles of the distinctions made in a traffic regard. The accepted authorities in this matter are certain classifications (or classification catalogues) known as the Official, the Western and the Southern classifications, applying in different portions of the country — the Official classification in territory east of the Mississippi River and north of the Potomac and Ohio rivers, the Western in the territory west of the Mississippi River, the Southern in the territory east of the Mississippi River and south of the Ohio and Potomac rivers.¹ (Certain classifications valid only in the boundaries of states are known as the Illinois, Iowa and Georgia classifications.) It may be observed, in the first place, that freight classification in the abstract should not be regarded merely in the light of a purely mechanico-physical problem, i.e. a matter of the distinction of things according to mere size, weight, material. Things considered as freight must be regarded as having a quasi-*human* quality; their size, weight, material, have direct reference to human interests and wants. It is probably due largely to the mistake of regarding freight as consisting of mere things out of relation to personality that so much rough handling of freight occurs. It is difficult to understand how men, really remembering that they are dealing with *human* things, could fail absolutely to distinguish articles

¹ It has been proposed that a uniform classification be adopted for the entire country, but this seems to have been decided impracticable because of the different economic conditions of the different sections of the country.

of freight from mere "stocks and stones," as they sometimes appear to do. Again, freight classification is not a mere repetition or modification of ordinary or of scientific classifications, but has a distinct principle of its own, namely, that of transportableness in its various modes and degrees, — the conditions under which freight may be moved and delivered at destination as nearly as possible in the form in which it is ordered by consignee from shipper; the form required, that is, by an equitable exchange. Now the conditions to be considered that determine the transportableness of objects are such as the following: bulk, weight, the two taken in their relation, the *average* size of shipments, kind of material, damageability or perishability, mode of packing, use and value, safety or dangerousness of articles shipped; the nature and value of the service to be formed, the manner in which charges have to be handled, the amount of business in sight, the amount of charges the business may be made to bear. The exhaustive study of these conditions belongs rather to a different course of study from the present, but some illustrative examples drawn from the classifications may profitably be dealt with here. Ordinarily, it may be observed, the station employee finds little time, if he have the inclination, for such study. He limits himself merely to thumbing the classification for purely pragmatic or practical purposes; being given the name of an article to be classified, he turns to the index, finds the name there, together with a reference to an item in the body of the Classification furnishing the desired classification. He does not, as a rule, inquire into the *reasons*

of the classification which is given him. He scarcely has the proper point of view for such an inquiry, since he thinks only, or chiefly, of mere practical efficiency instead of intelligent or enlightened skill in his work. Practical efficiency appears to have a more direct relation to the object by which he is actuated, viz., that of being deemed worthy of promotion or of a higher salary. But this method of work has a certain practical — not to speak of any other — *disadvantage*. If an object be given for classification which is not named in the classification index, the employee is at a distinct loss, from lack of having given any real attention to the reasons or principles of classification; he is less apt or likely than he otherwise would be to perceive in what he has to classify, guiding analogies with other things already classified for him. Before taking up illustrative examples attention must be directed to some of the classification rules. One of these is, that articles shipped subject to a release take a lower classification (and rate) than if not so shipped. Another is, that “when parts or pieces constituting one or more complete articles are offered for transportation at one time by one shipper to one consignee and destination, they will be rated at the classification provided for the complete article, whether set up or knocked down as specified in the classification.” Another rule reads, “Unless otherwise provided for in the classification, all freight shipped in crates, racks, bales, bags or bundles will take, when shipped in crates or racks, the next class higher (greater) than in boxes, and when shipped in bales, bags or bundles, one class higher (greater) than in crates. Where the same rating

is provided for articles shipped in bundles or boxes, the rating given will apply upon shipments of the same articles crated.' When no rating is shown for articles in boxes, the rating shown for the same articles in crates will apply. When not otherwise specified in the classification, where the same rating is provided for articles shipped in crates or boxes, the same articles shipped in bundles will take the next class higher (greater). When not otherwise specified in the classification, the rating given on shipments in boxes shall apply upon shipments in barrels or kegs and vice versa. The terms 'boxed,' 'in boxes' and 'in barrels,' used in the classification, are intended to mean completely enclosed, and will apply on such packages made of wood (except as provided in paragraph B of this rule referring to articles in pulp-board packages); and the term 'crated' or 'in crates' to mean enclosed on all sides, including bottom, with framework, so as to allow of their being taken in and out of a car within the crate and so as to fully protect the article from damage by contact with other freight; and the terms 'in bags' and 'in sacks' to mean bags or sacks made of other material than paper. . . . Shipments made in basket-work packages (woven wood and wire) or in boxes with slatted tops are rated as crated. Shipments in pressed steel kegs are ratable the same as if shipped in wood kegs. Shipments in fiber pails are ratable the same as if shipped in wooden pails. Chests filled with goods are ratable the same as boxes filled with goods. . . . Liquor packages smaller than barrels are ratable as kegs. . . . Carriers shall have the right to decline shipments in insecure packages." All shipments

in pulp-board packages not conforming to the requirements for the same are ratable as crated. "The amount charged for less than a carload of freight shall not exceed the charges on a minimum carload weight of the article." "Where the classification provides separate ratings for articles set up (S. U.) and knocked down (K. D.), the charges on any article shipped knocked down should not exceed what would accrue in the same article shipped set up." Now to consider a few illustrative examples. Wooden plow beams, not otherwise specified, in bundles are rated at second class; in boxes or crates, at third class, — difference in "packing." Baskets are rated at $1\frac{1}{2}$, 2, 3, 4 times first class, on account of being light as well as bulky. Carriers "returned" are rated mostly at fourth class, notwithstanding their combined bulkiness and lightness, presumably on account of the indifferent service necessary in their transportation. Piano boxes returned form an exception, however, being rated at double first class; they are exceedingly bulky and light and have value. Scientific instruments are rated at double first class because of their value and of the high degree of their damageability. Because of their perishable nature fresh fruits are rated mostly at first class. Live stock in less than carload amounts is rated at first class and one and one-half times first class. Hay presses, with wheels on or off, other detachable parts removed, small parts in packages, are rated at third class; but if loaded on an open car, and so unprotected, are rated at first class, this rate to be charged on a minimum weight of 5000 pounds, i.e., not less than 5000 pounds to be charged for at this rate. Cereal products

and preparations, not otherwise specified (N. O. S.), in paper sacks are charged for at second class; in cotton sacks, third class; in boxes, kegs or barrels, fourth class. Ammonia, not otherwise specified, in carboys, charges prepaid or guaranteed, is rated at two and one-half times first class; in carboys with completely enclosed necks protected by wood on all sides, charges prepaid or guaranteed, at double first class; in bottles or cans boxed, at first class; in barrels, at second class; in iron drums, third class. In this case, clearly, the classification is made to depend on two or three things, — the damageability of the goods, the manner of packing and the manner in which charges are settled for. Fresh fish, prepaid or guaranteed, in l. c. l. amounts, is rated at first class; in c. l. amounts, at fourth class. Lard and lard substitutes n. o. s., in crocks or cans, go at first class; in glass jars, boxed, at second class; in tin-lined tubes, at third class; in cans boxed or crated, fourth class; in carloads, minimum weight 26,000 pounds, fifth class. Miscellaneous iron and steel articles, requiring a minimum of protection and having a relatively small value, are rated mostly at fourth class; the same is true of minerals and of lead and lead products. Paintings, pictures and photographs go mostly at double first class, on account of value and damageability; for the same reasons surgical instruments go at four times first class, double first class, one and one-half times first class, and first class simply. Paints and varnishes l. c. l. go mostly at second and fourth classes; c. l. at classes five and six. But further illustrations would doubtless be superfluous. There are many commodities which are not classified at all in

the regular classification documents, or are classified only as shipped in less than carload amounts. Of the latter sort the carload rating either is the same as the less than carload, or it must be sought in certain special commodity tariffs, which will have to be discussed later. Of the former sort of articles not specified in the classifications it is necessary to treat a little in detail at this point. Strictly speaking, in such cases, at present the agent's only resource in obtaining proper classification seems to be to ask the central traffic office of his company to furnish such classification; for, though formerly the classification contained a rule authorizing the application of the principle of analogy in the determination of unspecified classifications, no such rule is now recognized. The agent, however, if well grounded in the principles of classification, will be able, by analogical analysis and deduction, to arrive at classifications which, though not already overtly and explicitly recognized, will yet stand the test of investigation and be accepted as sound. The billing or forwarding agent may, then, still be governed by the formerly accepted rule of analogy in determining unsettled classifications. Some common articles whose classification does not appear to be explicitly or specifically settled by the (Western) classification are: bacon, cadavers, dynamite, graphophones, hogs (not crated), sheep (not crated), waste paper, hectographs, mimeographs, burros in a car of emigrant movables. Cases such as these are frequently rather difficult to deal with. Bacon probably belongs to the classification group of meats, dried, salted or smoked. Cadavers seem to be unclassifiable as freight; if shipped at all, would have to

be expressed. Dynamite might be classed as one of the high explosives, which some roads will not accept. Graphophones are analogous with the "talking machines" of the classification (see item "machines"). Uncrated hogs and sheep are apparently unclassifiable as freight, and if offered for shipment would have to be refused, though the classification does not name them among nonacceptable objects. Waste paper may be classed, perhaps, as scrap paper easily enough. Hectograph and mimeographs probably belong with what the classification styles "letter duplicators." Burros, if loaded in an emigrant car, would probably be called "mules." Before dismissing the topic of class ratings it is necessary to call attention to the fact that the "lettered" classes — A, B, C, D, E — and the fifth class have to do exclusively with carload shipments.

Other principles and rules besides those especially referred to above are contained in the classification authorities. Some of these will come up for consideration on future occasions.

We may close our discussion of the present general topic by a remark or two of a historical nature. The principles and rules of freight classification have been arrived at as a result of natural evolution in an economic regard. This has necessarily been so because of the intimate relation existing between railway growth in general and economical development. It is impossible, therefore, to regard the classifications as products in any considerable degree of merely arbitrary resolution or determination on the part of railway managers. Further, the tendency of classifications has been histori-

cally downward rather than upward. From time to time changes have been made in existing classifications, the rank of some articles in the scale of classes being raised, that of others lowered, the latter outnumbering the former fully one hundred per cent if not more. In these facts, it may be observed, is contained a suggestion to the agent which may be utilized in his educational efforts on his company's behalf. If shippers were more commonly instructed in matters such as this, fewer complaints would arise from them as regards the treatment accorded them by transportation companies.

CHAPTER XV

FREIGHT TARIFFS, RATES AND MISCELLANEOUS CHARGES

What a Tariff is — Tariff Necessary and Absolute as Authority for Rates — Paramount Importance of Knowledge of Tariffs — Differences in Tariffs as to Clearness and Convenience of Application — Tariff Circulars — Classification of Tariffs and Circulars — Filing of Tariffs and Circulars — Public Inspection of Tariffs and Explanation of Tariffs to Shippers — Wiring for Rates — Methods of Ascertaining Rates from Tariffs — Apparent Discrepancies and Confusion of Mind Caused by Them — General Rate Problem, Different Principles of Rate Making and Proper Mental Attitude in Regard to the Subject — Explanations of Rates to Shippers — The Minimum Charge — Maximum Charge — “Special” and “Specific” Commodity Rates — Conditions of the Application of Rates — Miscellaneous Freight Transportation Charges, Demurrage, Storage, Reconsignment, Rules of Same, Switching, Stopping in Transit, Refrigeration, Rental, Transfer, etc. — Importance of Care in Handling Miscellaneous Freight Transportation Charges.

THE ratings shown in the classifications are obviously mere indices to concrete amounts, called rates, which must be learned from some other source, viz., the tariffs so-called, with which every agent is presumed to be familiar. In the tariffs are shown also certain rates which are in no way indicated in the classifications. Such are the rates known as special commodity rates, to be hereafter explained. A tariff may be described as a table of rates, with accompanying instructions as to the conditions under which traffic taking the rates shown occurs. The conditions named by the tariffs are of a varying nature in themselves, and differ greatly in dif-

ferent tariffs. They have reference to such matters as the classes and commodities covered, the particular territory within which the rates are applicable, the routes or railways by which applicable, the minimum and maximum weights of shipments, the minimum and maximum charge, the manner of loading and unloading, special charges, classification exceptions, amendments to previous issues of the tariff, notice of cancellations or of reissues, notice of date of issue of tariff and date effective, names of roads participating in the tariff, etc., etc. All these items have to be carefully taken into account in the application of the tariff, and all the more so that they are continually undergoing modification to a greater or less degree and that all rates quoted or applied must have absolute tariff authority. And, in reference to this point, it is both interesting and important to note, in passing, that the case in recent years is quite different from what it appears to have been formerly. Formerly, it would appear, rates might be quoted secretly, not being published till afterwards, or even at all. Later the secret quoting or application of rates was prohibited by law, and at present no rates may be quoted or applied which have not *already* been *published*. An agent can no longer legally quote a rate to a patron and then ask his superior officer in charge of rate-making to ratify his quotation; a traffic official cannot now reduce a rate on a misrouted shipment from what it should properly be to what it must be in order to meet competition with the rate applicable by the authorized routing. To prevent unjust discrimination as between shippers, the law, under heavy penalties for violation, makes it necessary that

the agent be governed entirely by published tariffs. And it is obvious that, if the agent studies and masters the tariffs, he can quote and apply rates with as much authority as any traffic official. (The agent has not, of course, any power to *make* rates outright.) And it is also true that no error in quoting or applying rates may be disregarded by the railway company, on the one hand, or by the shipper, on the other. The correct charges, as shown by the published tariffs, must be assessed; undercharges and overcharges must eventually be properly *adjusted* at whosever advantage or disadvantage. The present situation in regard to this matter is therefore simpler and clearer than was the former one. Formerly overcharges and undercharges might be arbitrarily treated, according to the whim or interest of the company or to the power and influence of the shipper; and the agent could never be quite certain as to how he might fare, — as to whether or not he might have to make good an undercharge or be able, perhaps, to escape such an ordeal. Since everything depends upon the tariff, it is evident that the proper study and comprehension of it becomes a matter of the greatest consequence. And it may be remarked that there are among tariffs great differences as to ease of construction or of comprehensibility, differences in the methods according to which they are framed, the amount of territory covered, the number of exceptions specified, the conditions governing the application of rates, etc. The difficulties in handling tariffs are such as can be overcome only by strict attention to them and a careful sorting out, from the multitude of tariffs received, of certain ones (i.e., those actually or

especially available or necessary in the work of the station) for intensive and exhaustive study while others are filed for occasional reference. Besides the tariffs, strictly so-called, there are tariff circulars dealing with the proper division of certain joint rates, the territorial divisions and numerous miscellaneous matters. Some of the circulars are of more than ordinary interest and importance for the daily work of the station, others being of occasional application or of no real application at all.

Tariffs admit of various classification. There are distance tariffs, necessitating a reference to the tables of distances along the line of road to which they are applicable, tariffs naming rates outright, tariffs requiring the use of tables of division or of the addition or deduction of arbitraries in the construction of rates; there are local tariffs, joint tariffs or combined local and joint tariffs; there are class tariffs, commodity tariffs and combined class and commodity tariffs; there are system tariffs and foreign tariffs; there are Western Trunk Lines Association tariffs, Texas tariffs, Southwestern Lines tariffs, Trans-Missouri Freight Bureau joint tariffs, Trans-Continental Freight Bureau tariffs, etc., besides the tariffs of the multitude of individual railway companies; there are numerous tariffs of individual commodities, as brick, cement, coal, earthenware, grain, hay, lime, live stock, lumber, petroleum, potatoes, packing-house products, salt, stone, vegetables, vehicles, etc. Tariff circulars include percentage or division sheets, sheets describing territorial boundaries, a circular giving a list of tariffs in effect, a circular of lightweights, circulars dealing with routing, drayage and switching, storage

and car service, reconsignment, high explosives, transit privileges, refrigeration, rules of interstate traffic, rules of live-stock inspection and of meat inspection, exhibits at fairs, and other matters altogether too numerous to mention here.

Tariffs and tariff circulars require to be filed according to an order and in a particular manner prescribed by the proper officers of each company. The following arrangement is given merely as an illustration. In a cabinet of thirty pigeon holes tariffs are placed as follows: (1) classifications; (2) circulars, — switching, storage, rules and regulations, miscellaneous; (3) distance tariffs and tables; (4) class tariffs (system); (5) class and miscellaneous commodity tariffs, W. T. L. issues west of Missouri River; (6) class and miscellaneous commodities, foreign, west of Missouri River and east of Colorado; (7) class and miscellaneous commodity tariffs, foreign, east of Missouri River; (8) class and miscellaneous commodity tariffs, Colorado, Utah, Montana; (9) class and miscellaneous commodity tariffs, Southern Pacific, Oregon Railroad and Navigation Co., Oregon Short Line; (10) class and miscellaneous commodity tariff, Pacific coast; (11) class and miscellaneous commodity tariff, Oklahoma, Arkansas, Louisiana; (12) class and miscellaneous commodity tariff, New Mexico and Arizona; (13) class and miscellaneous commodity tariff, Texas and Mexico; (14) various commodity tariffs; (15) coal tariffs; (16) grain; (17) live stock; (18) lime, cement, salt; (19) lumber-system tariffs; (20) lumber, association lines; (21) and (22) lumber, foreign lines; (23) potatoes; (24) common points and way-billing

instructions; (25), (26), (27), (28), (29), (30), for overflow. Other ways of arranging tariffs are also in use. It is scarcely necessary to call attention to the fact that to keep such a file in proper state is a matter of some labor, and labor that is strictly necessary for the proper handling of the business of the station, since if tariffs cannot be located when needed, rates cannot be properly ascertained, and in consequence the railway company cannot be protected from loss in revenue. If the agent finds that the amount of the other work of the station threatens to interfere with the proper handling of the tariffs he should secure added assistance or should omit some things of minor importance to accommodate this particular sort of work.

According to the legislation of recent years it is rendered compulsory that the tariffs of railway companies be kept open to public inspection, which may be understood to imply that the public is in a sense made a party to the tariffs, or that a shipper shares the blame if by an error in rate any one is caused to suffer. The agent, of course, is expected and required to assist the shipper to an understanding of the tariffs which he is permitted to examine. And, it may be mentioned, some shippers — carload commodity shippers, especially — take deep interest in certain tariffs and are masters of their meaning. From them agents may often learn much. In fact, it is a very good plan for the agent to study tariffs together with the shipper, who, on account of the practical interest which the tariffs have for him, may have a profounder insight into the meanings of some of them than the busy agent might be able

to acquire. Presumably many tariffs, especially commodity tariffs, have arisen out of the representations and demands made by shippers themselves and not merely out of the brains of tariff officials. In case the tariffs filed at the station are found incomplete it is necessary for the agent to apply at once to the general freight agent or to the chief tariff clerk for a copy of the missing tariff or tariffs, or, if a rate is required on short notice, to wire the general freight agent for a rate, requesting that a copy of the tariff be sent to cover, since there must be tariff authority for every rate used. The importance of wiring and getting prompt reply should not be overlooked. If the rate desired does not exist in any tariff and must be established, the agent can ordinarily do nothing, it would appear. His advice might possibly be sought in the establishment of the rate, inasmuch as he would be expected to have some knowledge of the amount of traffic to move and of the needs and wishes of the shippers concerned. His intelligence and acumen in such a matter might be of valuable assistance to his superiors and might be fully appreciated.

Now the rates obtained by the use of the tariffs are arrived at in different ways, — some directly, others more or less indirectly. In one sort of tariff, what is required in finding a rate is, after determining classification of freight, merely to turn to the name of the station a rate to which is wanted, locate the column corresponding to the class of the freight in question at the moment, and read off the amount opposite the name of the station. This is the simplest thinkable case, and the one to which, as far as possible, all others should be assimilated. Too

many errors arise from more complex cases. A second way of arriving at a rate is as follows: the classification of freight having been determined, first ascertain from the table of distances the distance the freight must move, then, turning to the distance tariff, find therein the amount corresponding to the class of the freight as shown opposite the distance amount. Here two tables must be consulted instead of one. The possibility of error in reading off the proper amounts in the two tables is considerable, — twice as great, in fact, as in the first case. A third case is that in which the rate must be obtained by a little reckoning, in which, naturally more or less possibility of error is involved. Either the rate is a certain per cent or a certain fraction of a rate learned directly from the tariff, or it is arrived at by means of adding to or subtracting from that a certain arbitrary amount. There are other possible cases still more complex. In any of the cases, of course, the exercise of care is required. Now in the using of the tariffs and the comparison of them, one eventually becomes aware of many differences and discrepancies; curiosity, doubt and distrust arise as to the entire rate fabric, and, one may almost say, cripple the activity of the station. Rules that one does not thoroughly understand one does not find it easy and satisfactory to apply. A knowledge of underlying principles is always desirable, whether one is fully conscious of the fact or not; and to the lack of such knowledge is due much of the undercurrent of dissatisfaction that lurks in the thought of the ordinary agent.

Now the rate problem in general appears to be such

as no one yet feels prepared to solve satisfactorily. Yet some things pertaining to it seem to admit of clarification; and we shall therefore give a little space here to the matter, not on account of any definite or pointed practical information that we may hope in this brief study to gain, so much as on account of the general mental attitude that may be arrived at as a result. There is a well-known tendency and habit of the human mind to see or look for identity, similarity, uniformity in things, to reduce activities to *rules* of action. In rate making the most rational rule would, *prima facie*, be that of making the rate for transportation proportional to the distance traveled, — so much for ten miles, twice as much for twenty miles, etc. This rule, or something approximating it, works well for short distances, perhaps, but for longer distances it is less suitable, because the cost per mile for transportation seems, under existing conditions, to decrease as the distance increases; therefore a sliding scale of charges instead of a fixed one is applicable. Thus simplicity in a certain degree tends to the opposite. The "equal-mileage" rate will not "hold water." Any one can see, of course, that the cost of transporting freight partly over a level and partly over a mountainous country could not be equitably determined by such a rule. A different rule must be applied, which may be termed, and in fact is known in rate discussions as, the "cost of carriage principle." Let this, then, be taken as a new starting point, a higher rational principle. Now any one called upon practically to use and apply existing tariffs learns in a very few days, or even in a few hours, that this rule falls to the

ground flatly and repeatedly. He discovers that the first-class rate to a point, for example, eighty miles from his station is, say, forty-six cents, and that precisely the same rate applies to a point one hundred and fifty miles or even to one two hundred miles distant along the same continuous track. What has happened to overthrow the new principle? The answer to this question may or may not readily occur to one raising it. In a sense there seems possible no fully satisfactory answer on any supposition. Why should it cost no less to transport an article of freight eighty miles than to transport it two and one-half times as far? One may perhaps reply, the cost of the two services performed is the same, on the same principle that the cost of carrying a letter is the same for practically all distances. But this does not seem at all plausible, even, the cases are so different, and there is no likelihood that the postal method of collecting charges for transportation services will ever obtain the sanction of railway managers. In order to resolve the riddle in the case supposed it becomes necessary to look away from merely local conditions. If there be another line, a shorter line than the home line, which also reaches the aforesaid point two hundred miles distant, that line, on the principle of "equal mileage" or on that of "cost of carriage," can offer a lower first-class rate than can the two-hundred-mile line on the like principles. If the longer line desires to maintain service between the two points two hundred miles distant from each other it must accommodate its charge to that of the shorter line. Now it certainly appears paradoxical that it should attempt to do so,

and a *new* principle is adopted, that of competition. This new principle (and there are others still) is still more difficult to comprehend in its operations than any other proposed; but it seems to afford a better *statement* of the problem than any other; or, rather, the several principles, each in its proper application, seem to afford a degree of satisfaction to the mind which a merely pragmatic unenlightened dealing with the rates would admit of. And although the rate problem remains to be *solved* by economic experts alone, there seems no reason to doubt that the ordinary agent and the company employing him would be, on the whole, gainers if he studied his tariffs and the rate question generally somewhat from the higher points of view as well as from the lower. By so doing he would feel better satisfied with himself; and, what is of considerable practical importance, he would be able better to satisfy the patrons of his company. The apparent incongruities in railway freight rates are altogether too plain not to be perceived by, and to disturb, shippers in general. Anything the agent can do to promote a better understanding than exists regarding rate matters will be of value to all concerned; the public mind, disturbed in regard to such questions, is prone to seek a remedy for apparent evils, and to seek it, perhaps, where it may not be found. The solution of the problem must, it would appear, lie in the direction of economic inquiry and development, while the public as such appears to expect it from a merely legal or legislative source. It seems incumbent upon the agent to have enlightened opinions regarding the whole question; and in the formation of these a certain

amount of historical knowledge is valuable, — knowledge of the history of rate development; for the history of rates everywhere proves them to be the results of natural development rather than of arbitrary institution; and it goes to show, also, that in their natural development they tend to become more adapted to the public economic welfare, to become lower and more available for all. Exceptions to these rules there may be, but the rules themselves are valid. And here, perhaps, eventually may be found the key to the solution of the rate problem as of other railway problems.

But leaving these general considerations, we have now to speak of a particular sort of rate depending scarcely upon classification rules, and not found in the regular tables of rates, though in regular use in the assessment of ordinary freight transportation charges. This is the so-called minimum charge. This charge is not assessed according to any of the principles above mentioned but is quite arbitrary. The minimum charge is the least charge to be assessed on any shipment, however small. It is either an outright amount, say twenty-five cents, or it is an amount described in terms of one of the class rates, as the charge for a hundred pounds at the rate of the class to which the freight belongs, or, again, as the charge for one hundred pounds at the third-class rate. This charge, it will be seen, is quite peculiar in its nature, though very common. It may be said to correspond in a manner to the "postal" rate principle. The charge is apt to vary on different lines of road or on different parts of the same system. The Classification gives a rule for maximum charges, as follows: The amount

charged for less than a carload of freight should not exceed the charges on a minimum carload weight of the article. Other rules may be found in some of the particular tariffs.

Particular mention requires to be made of what are called "special-commodity" rates. These are rates, to which no clew is given in the classification, on certain commodities, as grain, coal, salt, etc., shipped mostly from certain producing centers rather than from all points indiscriminately and calling for special treatment in the matter of charges. From commodity rates as "special" must be distinguished "specific" commodity rates. Rates are specific when applicable only to certain specified commodities, between specified points, etc., and not on analogous commodities or to points not specified. In this sense all rates are specific, since the law recognizes no rates not specifically authorized by tariff.

Very important in the use of rates is the observance of the conditions of their application as stated in their tariffs. The conditions are naturally various, and include routes, territory, mode of packing, provisions as to car service, storage, switching, manner of loading or unloading, weights, minimum charges, etc. As regards routes, for example, in a given tariff are contained rates applicable from certain specified points (say group A) to a group (B) of other points. Apart from the routing restrictions all rates named would have to apply in the same way; but if routing instructions be observed, then a part of the rates will apply from group A points to a part of group B points reached by a *certain specified route*; another part of the rates would apply to

a different part of group B points reached by a *different route*, etc. Or, to take one more illustration: A road (desiring to get the longest haul possible on a certain sort of traffic) publishes rates which are valid only if freight is received from connecting lines at a certain junction point, although there may be more than one junction point via which freight might be received. For routings it may often be necessary to refer to special routing circulars.

It remains to explain another class of charges which are not indicated by the classifications and are not shown in the regular rate tables as such, but are given incidentally in the tariffs, or more specifically in the tariff circulars. These are the so-called miscellaneous freight transportation charges, — demurrage, storage, diversion or reconsignment, out-of-line haul, stopping in transit, concentration, transfer, refrigeration, rental, etc. What may be said here on these matters is necessarily somewhat incomplete and is not offered as a substitute for what is given in the tariffs and tariff circulars. Demurrage is a charge (\$1.00 per day) for delay in loading or unloading cars beyond a certain "free time" allowed (usually forty-eight hours). It is collected daily as it accrues, and if payment of it is refused, the loading or unloading of the cars may be stopped, demurrage still accruing, until payment of charges is arranged for. Demurrage is assessed on car-load shipments. Storage is the charge made on delayed l. c. l. shipments held in the station warehouse beyond a "free time" of forty-eight hours. The rate per day for storage is ordinarily five cents per ton. Storage, as

well as demurrage, rules vary somewhat in different parts of the country. A reconsignment charge is made when a shipment en route or at destination is ordered by shipper to a new destination. The practice with regard to this varies considerably. Reconsignment of only certain classes of shipment, e.g., coal and coke, is allowed on some lines or under the provisions of some tariffs. Following are examples of rules sometimes applied: 1. If destination is changed in transit to or within twenty-four hours after arrival at first destination a reconsigning charge of \$2.00 per car will be assessed. If made after twenty-four hours and within forty-eight hours from arrival at first destination a charge of \$3.00 per car will be assessed. If made after forty-eight hours and within seventy-two hours from arrival at first destination a charge of \$4.00 will be assessed. After the expiration of seventy-two hours no reconsignment will be permitted except on combination of local rates. (In case reconsignment is made earlier the *through* rate from shipping point to final destination will apply.) 2. If change of destination requires the handling of a car one hundred miles or less out of direct route from point of origin to final destination, a charge of \$5.00 per car will be assessed in addition to reconsigning charges. 3. Changes in destination involving an out-of-line haul of more than one hundred miles will not be permitted. When a car, arriving at its destination, is switched to a connecting line for delivery to consignee, a charge is made for the service performed, varying from \$1.00 to \$6.00 according to circumstances. In case of competitive business *switching charges* are, generally speaking,

"absorbed," i.e., waived so far as the consignee is concerned. The practice of different roads varies considerably. On lines that are strict in their construction and application of tariffs, business in such case would be deemed competitive only if the line that performs the switching service really publishes the same rate on the same class of shipments from the same point of origin as the line for which the shipment is switched. When it is desired to *stop* a shipment *in transit* for the purpose of part loading or part unloading or of milling, cleaning, planing, inspecting, etc., a charge of \$5.00 is usually made. The privilege of stopping for such purposes is permitted only with regard to certain classes of shipments, which are different on different lines. Among such shipments are agricultural implements, beer, junk, mineral water, paper, stoneware, furniture, melons, lumber, grain. No stopping privilege is granted on "shipper's order" shipments, for a reason which is perhaps obvious. A *concentration* charge is made when freight in small lots is unloaded at an intermediate point to be stored and accumulated for a certain period and then forwarded in large lots. A certain storage charge, say ten cents per cwt., is assessed in addition to the through freight charge from point of origin to final destination. (This arrangement is very convenient for produce dealers.) A *refrigeration* charge is made for the icing of cars loaded with perishable goods. The details of this matter should be learned from the tariff circulars relating thereto. The classification authorizes a free allowance of three thousand pounds. On certain classes of cars, very uncommon and very special in

construction and use, a *rental* charge is sometimes made, as on "palace cars" used for transporting valuable horses and on live-poultry cars. When it is necessary to transfer the contents of a car en route, because of overloading, of bad order, or because a company is unwilling to allow its cars to go to connecting lines, as in times of car shortage, a *transfer charge* is made. Miscellaneous charges, though comparatively insignificant in amount, must not on that account be overlooked, but, the rather, should receive special attention. As a matter of practical fact these charges often prove very troublesome, partly on account of the difficulty of collecting them oftentimes, partly because of their being overlooked or forgotten by reason of their relative smallness. There is, we may also say by way of anticipation, a certain difficulty in the proper accounting for them. The *special* nature of miscellaneous charges as compared with the usual freight transportation rates is so plain that it scarcely needs emphasis. Generally speaking, such charges seem to be based approximately on the principle of "cost of service." With regard only to switching charges — the actual collection of them — does the principle of competition seem to be operative; but it does not affect the amount of them.

CHAPTER XVI

FREIGHT WEIGHTS

Meaning and Importance of Weight in Traffic — Terms Applied to Weight — Shipper's Weights — Estimated Weights and Factitious Weights — Examples of Estimated Weights — Certified Weights — Minimum and Maximum Weights — Rules and Examples of Minimum Weights — Classes of Minimum C. L. Weights — Track-scale Weights and Rules of Their Application — Invoice Weights — Connecting Line Weights — Railway Weighing and Inspection Bureaus and Associations.

IN assessing freight charges there is given to be solved the very simple problem of finding the product of the given rate by another factor called the weight; and it is therefore necessary to study the matter of freight weights. The term "weight" has a varying meaning; it denotes (1) literal, actual weight, (2) weight which is not actual but which is approximately so and is conveniently assumed as such, (3) weight as representing, instead of mere load, the dimensional aspect of freight or the dimensional capacity of equipment. It is quite evident that the matter of weights is one of the very highest importance; and this truth is testified to by the fact that on some lines of railway some one of the leading traffic officials is placed in special charge of it, and the fact also that there are various bureaus, the country over, to whom is delegated by the railways the duty of supervising the practices followed in the weighing of freight and of securing accuracy and uniformity.

Among the terms employed in speaking of weights are the following: "actual weight," "estimated weight," "gross weight," "net weight," "shipper's weights," "certified weights," "invoice weights," "minimum weights," "maximum weights," "track-scale weights," "connecting-line weights," "Railway Weighing Association weights." Necessary explanations of any of these terms will follow. It is a leading rule of the classifications that "articles of freight shall be charged at actual gross weight, without regard to weight given by shippers and inserted in bills of lading, except that when an estimated weight is given in the classification such estimated weight will apply unless the actual weight is greater." Gross weight is, of course, weight which includes the weight of the packing, if any, necessary in the transportation of freight; net weight, the weight of freight without the packing. This difference, simple though it be, is one that is apt to be overlooked and its application must be carefully watched at the station. The selfish interest of the shipper naturally would be to substitute net weight for gross weight. Certain classes of shippers are more inclined, it appears, than are others to make such a substitution, and these in particular may require the attention of the agent, who, if he accepts shipper's weights at all, must clearly understand what weights he is called upon to accept. As to shipper's weights, it does not appear that they should as a rule be accepted unless fully certified, and shippers should be prevented from thinking they may do anything which shall stand in the way of the agent's ascertaining the correct weights of all shipments forwarded. Some

shippers have the habit of carelessly (or intentionally, it may be, sometimes) bringing freight to the station at the last moment before the time of the departure of trains, so that the weighing of freight is made impracticable. Their freight, when so offered for shipment, should, of course, be held for a following train, or, if necessary, refused entirely. Should goods be forwarded without having been weighed, notice of the fact must, as has already been stated, be given to the agent at destination. The term *estimated* weights as employed in the rule above quoted has reference to certain classes of weights which, though not actual, are well grounded in the nature of the shipments upon which such weights are properly applicable. Examples of these will be given. From such weights must carefully be distinguished *so-called* estimated weights, which are arrived at by a process of pure guessing. Such weights, which it may occasionally be necessary to employ, should be distinguished as "supposed" or as "conjectural." However, freight handlers may often practically be able to make reliable guesses at the weight of packages or articles similar in kind to others which have actually been weighed, and if they *do guess* their weights, it is hardly necessary to treat them otherwise than if they were actual weights. It is unfortunately true that many temptations arise to make purely factitious guesses at weights: freight arrives at the depot a little too late, or it is a little too heavy to handle conveniently, or is of a sort which, other things being equal, is better not handled, etc. It is necessary that the agent should not be neglectful in the matter of supervising the busi-

ness of weighing freight at his station. Following are examples of estimated weights in the classification sense of the term. Potatoes, c. l., 175 pounds per barrel. Eggs in standard egg cases or carriers containing 30 dozen or less are taken and charged for at 53 pounds per case; in such cases containing 36 dozen, at an estimated weight of 65 pounds; any excess number of eggs above 36 pounds to be rated at 2 pounds for each additional dozen. Eggs packed in heavy boxes containing 30 dozen or less are taken and charged for at 60 pounds per dozen. Live stock is charged for at estimated weights as follows: Horses, single animal, 2000 pounds; two animals, 3500 pounds; three animals, 5000 pounds; each additional animal at 1000 pounds. Bulls at 2000 pounds, burros at 750 pounds, calves at 500, colts at 750, goats and sheep at 200, stallions or jacks at 3000 pounds. Carriers, second-hand, empty, returned, are charged for as follows: barrels for ale, beer, etc., 100 pounds; half-barrels, 55 pounds; quarter-barrels, 30 pounds; eighth-barrels, 20 pounds. Other articles taking estimated weights are: bottles, beer, wooden barrels, oil barrels, petroleum, tank wagons, flour.

Certified weights are weights which are accompanied by an affidavit or by formal and explicit signed affirmation of shipper or of some weighmaster as to their correctness. Such weights are accepted in the settlement of claims in case no others are available which can consistently be relied upon. They should apparently be accepted by agents in the assessment of charges on freight forwarded or received. Invoice weights, or the weights shown on a shipper's bill of sale for goods bought

or sold, have about the same value as certified weights. In claims they may sometimes take precedence of a company's track-scale weights, if the manner in which they have been arrived at is evidently satisfactory, as, for example, would be the case if a shipper of grain put in evidence a certified copy of his loading card showing the exact number of sacks of grain at, say, one hundred pounds each.

Minimum weights are, as the very name signifies, the least or lowest weights at which certain specified classes of shipments may be charged for; maximum weights are the highest which it is allowable to place in specified classes of equipment. Minimum weights have as their purpose the protection of a company against the misapplication of its equipment and consequent loss of revenue through underloading; maximum weights, on the contrary, have as their purpose, generally speaking, the prevention of the abuse of equipment by overloading. Maximum weights are covered by a comprehensive rule: no car should be loaded beyond ten per cent above its capacity,—i.e., its *load* capacity, of course. There are numerous rules with regard to minimum weights which are best learned from the tariffs. A rule which might apply as regards one commodity would not necessarily apply as regards another; and even in reference to the very same commodity, grain for example, there might be different rules for different parts of the very same line. As examples of rules governing minimum weights the following may serve: "The minimum weight of corn, car-load, shall be the marked capacity of the car used, less 2000 pounds," or, "In case it is necessary to do so, in

making a 'clean-up' of grain at an elevator, a minimum weight of 24,000 pounds on a straight carload, or of 30,000 pounds on a mixed carload, may be applied on a single car." The minimum weights of shipments of special commodities are found in the special commodity tariffs; the minimum weights of many classes of l. c. l. shipments and of all miscellaneous commodity shipments are shown in the classifications. The usual minimum weight of l. c. l. shipments is 100 pounds; but there are many minimum weights much higher, examples of which are, 5000 pounds for hay presses loaded on an open car, 5000 pounds for lift vans n. o. s. empty, 1500 pounds for wagons n. o. s. taken apart, 10,000 pounds for traction engines on own wheels, 1000 pounds for lawn engines, 2000 pounds each for hose carts loaded in box car, 5000 pounds for well-boring machines loaded on flat cars, 4000 pounds each for automobiles, 8000 pounds for papier-mâché advertising or display figures prepaid or guaranteed, wrapped or crated, 5000 for snowplows, 6000 for chemical fire engines. The classification states a rule fixing the minimum for l. c. l. shipments loaded on flat cars at 5000 pounds. The minimum weights applicable to miscellaneous carload shipments may perhaps be grouped as follows: (1) minimum weights for light and bulky commodities; (2) for heavy commodities; (3) for intermediates. Examples of minima for light and bulky commodities are: for fanning mills, 12,000; corn huskers, 12,000; lawn rakes, 10,000; barrels, 14,000; filing cabinets, 16,000; baskets, 10,000; feed-cutters, 16,000; wooden boxes and crates, 12,000; oil cans, 14,000; ladders, 16,000; live poultry,

18,000. Minima for heavy commodities are minima depending on the marked capacities of cars or nearly so, as of grain, coal, asphaltum, brick, etc., ranging say from about 40,000 to 100,000 pounds. Examples of intermediate minima (ranging from 20,000 to 40,000 pounds) are: for advertising matter n. o. s. boxed or in bundles, 24,000 pounds; shoe blacking, 30,000 pounds; canned meats, 36,000 pounds; bran or shorts, 30,000 pounds; epsom salts, 36,000 pounds; earthenware, 24,000 pounds; beehives, 20,000 pounds; glass, 24,000 pounds; cotton-seed meal, 36,000 pounds; steam fire engines n. o. s., 24,000 pounds; green fruit, 24,000, etc. Some of the intermediate minima are made to depend upon the dimensions — the lengths — of cars, as 19,000 pounds for cattle in stock car not over 31 feet in length; 20,500 pounds if car is 31 feet to 33 feet, 9 inches in length; 22,000 if car is 33 feet, 9 inches to 36 feet, 6 inches in length; 24,000 if car is 36 feet, 6 inches to 40 feet in length; and 36,000 if more than 40 feet in length. The minima for street cars, for hay and for lumber, also depend upon the length of cars used. The classification gives a table of minimum weights applicable to light and bulky freight in cars of different lengths.

For the actual weights of carload shipments recourse is necessarily had to the track scales located along the line. The weights determined by means of these govern in the assessment of charges by the delivering agent. (If shipper or consignee is dissatisfied he may, if "invoice" weights warrant it, make claim for a reduction of charges.) If there are two or more weights, ascertained by different track scales, as may sometimes

happen, certain special rules apply, among which are the following: (1) on shrinkable commodities apply the first given track-scale weight; (2) except when otherwise provided, when variation is 500 pounds or less, apply first track-scale weight, unless the known actual weight is greater; (3) where the variation is more than 500 pounds the agent must endeavor to determine correct weight in some other manner; (4) if two of a number of weights sustain each other, use them in preference; (5) if actual weight cannot be correctly determined at destination, the highest given track-scale weight must be applied; (6) when cars are stopped in transit to part unload, apply the weight ascertained at the original point of shipment; (7) when stopped to complete loading, apply actual weight determined at final destination; (8) when stopped to complete loading and again stopped to part unload, use original weight plus amount added to and minus amount subtracted from original load. Frequently it may happen that cars are moved from shipping point to destination without being weighed en route and cannot be weighed at destination. In such case invoice weights, if they can be obtained, would be applicable. If they are wanting, the shipment might be measured — if, for example, it were a car of grain — and the weight ascertained from the cubic contents of it. Or if this were not practicable, as it would not be in case of a carload of emigrant movables, the shipment would have to be inspected and an estimated weight thus obtained applied, unless shipment could be actually weighed.

When it is found impracticable to reweigh a shipment

received from a connecting line, the weights of such line are used in billing the shipment forward, although it is necessary to instruct that the car be weighed en route to destination. And, on the contrary, if a car destined to a point on a connecting line is received at the junction point without having been previously weighed, it may, in case it cannot be weighed at the junction point, be delivered to the connecting line with accompanying instructions to weigh it and report back the determined weight for the correction of charges.

By agreements among the companies, various bureaus have been established in the country for the purpose of supervising and guaranteeing the weighing of freight, and the weights guaranteed by them are accepted by the companies. The names of several of these bureaus are: Buffalo Joint Weighing and Inspecting Bureau, Cleveland Weighing and Inspection Bureau, Southern Weighing and Inspection Bureau, Trunk Line Association Freight Inspection Bureau, Joint Rate Inspection Bureau, Pittsburgh Weighing and Inspection Bureau, Western Railway Weighing Association and Inspection Bureau. The bureaus enter into agreements with shippers whereby the latter consent to place themselves under the inspection of the bureaus for the advantage that may accrue to them from having their shipments move promptly from shipping point to destination, without interruption from weighing and inspection en route. Upon billing for shipments of firms whose weights are guaranteed by the bureaus, information of the fact is stamped by the billing agent and all trouble of weighing the car while in the hands of the

company is obviated. It is of course imperative, in the handling of such shipments, that the stamp be not omitted from the billing, thereby causing interference with privileges guaranteed to the shipper. And if the shipment is rebilled en route, reference must be made on the rebilling to the original stamp. Nor must the stamp be applied to billing of shipments which are not entitled to the privileges afforded by it.

CHAPTER XVII

ACCEPTING AND FORWARDING FREIGHT

Goods not Acceptable as Freight, List of Same, Rules Regarding Non-acceptable Freight — Goods Accepted and Forwarded Subject to Special Conditions: Live Stock, Perishable Goods, Explosives, Contaminative Goods, Goods of Special Value, Fragile Goods, Goods Shipped Subject to Shipper's Order, Goods on which Charges Must be Prepaid, Freight Destined to Large Cities, Quick-dispatch Freight, Other Classes — Bills of Lading, "Straight," "Order," Live-stock Contracts — Waybill, Description and Analysis — Classification, Small, Medium, Blanket, Live-stock, Perishable Freight, Time Freight, Ordinary Freight, Waybills; Local and Through; Collection and "Prepaid only" Waybills; Revenue, Memorandum, Card; Switching; Company Material; Freight-train Baggage Waybill — Explanations — Supreme Importance of Accuracy in Billing — Record of Waybills — Delivery to Conductor — Carelessness in Regard to Out-billing.

ON the presentation by shipper of goods to be forwarded it must first be determined whether or not they may be accepted. To do this presupposes a knowledge of classification rules and conditions, and in particular of the list of articles not acceptable for shipment. The warehouseman, whose duties in general relate to handling the goods shipped rather than to the rules and regulations in general of freight shipment, must inform himself thoroughly regarding this particular matter. This, it is obvious, is necessary for the protection of the company against claims for damage and loss to shipments not really transportable in their nature and therefore peculiarly liable to damage and loss by transportation.

In protecting the company the warehouseman protects himself also. Shipments that are not really acceptable do not require to be handled by him at all; in regard to them, if he accepts no responsibility he incurs no risks; it is doubly advisable, therefore, for him to be well informed as to what should and what should not be accepted for transportation as freight. From this point of view a pretty complete list of articles or classes of articles not acceptable for shipment would have a distinct advantage, and therefore, in addition to those offered as illustrative examples on a previous page, we give the following:

- Ammonia in cans, not boxed.
- Archery goods, not boxed.
- Automatic coin slot-machines, in baskets.
- Broom-corn, loose.
- Birds alive, n. o. s. in cages.
- Burial cases, not boxed, crated or wrapped.
- Bicycles, tricycles and velocipedes, n. o. s.
- Billiard tables, not boxed or crated.
- Billiard table slates and slabs, not boxed or crated.
- Cheese, loose.
- Clothing, n. o. s., in bales.
- Electric light bulbs, not packed.
- Ether and chloroform, not in cans, sealed and boxed, or in iron drums or demijohns, securely packed.
- Glue stock, green, in sacks.
- Game not permitted by state laws.
- Jewelers' sweepings and tailings.
- Lamps and lamp fixtures, not packed.
- Lanterns, not packed.
- Moldings, loose.
- Musical instruments, not boxed.
- Oils in glass, cans or jugs, not packed.
- Opium.
- Organs, pianos and melodeons, l. c. l., not boxed.

Pianos and organ players, automatic, not boxed.

Packages of paintings, photographs, panorama scenery over \$500.00 in value.

Paintings, pictures, photographs and framed advertisements, not boxed.

Rugs, invoice value exceeding \$50.00 each, not boxed.

Rags, loose.

Rope, loose.

Sewing machines, n. o. s., not boxed or crated.

Sewing machine and cycle oil, not boxed.

Turpentine in glass cans or stone jugs, not packed.

The classification gives two or three general rules regarding freight to be refused: carriers shall have the right to refuse to receive any freight offered for shipment which is likely to damage other freight or cars; bulk freight will not be taken in less than carloads unless so specified in the classification; freight containing anything of the nature of a lottery ticket must be refused. If one refers to the conditions of classification mentioned in a previous paragraph (p. 141) one finds little difficulty in discovering reasons for the nonacceptableness of the articles covered by the foregoing list and rules. It is perhaps unnecessary to dwell upon the subject here.

Many articles not classed as nonacceptable have to be accepted and forwarded under peculiar and express conditions or limitations. These we shall discuss in some detail, beginning with: (1) Live stock, which includes horses, mules, cattle, hogs and sheep. The equipment ordered for live stock, besides being of specified dimensions (length), must be "prepared" (i.e., "bedded," and possibly cleaned and disinfected) for the reception of the stock. The stock is loaded by the shipper, but in the presence of the agent (or an assistant), who should

note the condition of the stock loaded, and must be billed at "shipper's load and count" (S. L. and C.). According to government quarantine regulations the stock must, if shipped from a quarantined district, be inspected before being shipped, i.e., if shipments are interstate shipments. Shipments not infected with disease may, without inspection at shipping point, be "carded" (by means of placard placed upon cars) "Uninspected clean cattle" and then inspected at destination. Cattle not visibly diseased but which may have been exposed to disease may be forwarded as "uninspected exposed cattle," for immediate slaughter or for treatment, cars and waybills being made to show the character of the shipment. Other rules we have not space to quote. Severe penalties are provided for the violation of government law in the matter of interstate shipments of live stock. The various states have *their* laws regarding stock shipments. A legal limit is fixed as to the amount of time, ordinarily twenty-eight hours, stock may be kept in transit without feeding and watering. In case shipper makes a written request the time may be extended to thirty-six hours, if the shipper at the same time releases the railway company from any liability for damages in case stock should suffer by the extension of the time. Dispatchers are apt to insist upon the shipper signing such release, unless it is absolutely evident that the shipment may be moved to destination without any risk whatever within the ordinary legal limit. This is a point to which the agent has therefore to give special attention. The time at which stock is loaded must be noted, also the time when stock

was last fed and watered before shipment (if stock was received from connecting line), and must be shown on the billing for the stock. And again, a live-stock contract, signed jointly by shipper and agent (for the company), must be executed. The billing, too, must be of a special character, giving minutely all information necessary for the correct handling of the stock. Horses, naturally, require greater care in their handling than any other class of stock; and horses that are to be delivered to connecting lines must not be accepted unless accompanied by a person in charge. The foregoing description of the pains that must be taken in the acceptance and forwarding of live stock, applies primarily to carload shipments. For the sake of comparison one may say here that in the acceptance and forwarding of an ordinary carload shipment, requiring no extra or special attention, little or nothing is necessary beyond a preliminary inspection of the car and furnishing a bill of lading for the shipment when it has been fully loaded.

(2) The rules covering the complete handling of perishable goods number four hundred more or less; it will be possible here to mention only a few leading requirements. Perishable goods are such as the following: fresh fruits, vegetables, melons, fresh meats, oysters, packing-house products, game, dressed poultry, liquids, such as ale, beer, porter, bluing, cider, fruit juices, malt extract, medicines, mineral water, vinegar, wine, and various other commodities, as candies, canned goods, confectionery, cheese, cocoanut, eggs, ice, sauerkraut, mince-meat, nursery stock, nuts, paste, pickles, etc., etc. Generally speaking, perishable goods must be handled

in other than ordinary box cars, although such cars, and even stock cars, are often used when no danger of freezing is feared. The cars which are especially intended for perishable goods and must be ordered for them, if not already on hand, are (as has been indicated in speaking of equipment) either (a) refrigerator cars having ice tanks and ventilators, (b) insulated box or ventilator cars having no ice tanks, (c) insulated box cars having neither ventilators nor ice tanks; and in ordering cars for perishable goods discrimination must be exercised. Refrigerators must be ordered if the use of ice is required. Such cars must be especially set, at the ice house, orders having been given to the section men to be on hand to fill the ice bunkers with the proper amount of clean ice, varying somewhat under different circumstances. Fresh meats, small fruits, many packing-house products, require a full amount of ice. The drainpipes of the refrigerators must be cleaned out to prevent water from melting ice flooding the car and damaging the goods therein. Strict attention must be paid to shippers' instructions or, in the absence of such, to the published rules of the company regarding icing, ventilation and drainage; and upon the agent falls the responsibility of supervising the necessary series of steps, though the work must in part be done by others. Record must be made and preserved of the condition of the car, whether clean or not, moist or dry, etc., and of the shipment loaded in it, of the amount of ice furnished, and its condition, amount of salt combined with it, condition of the drains, etc.; and full reports must be made to the superintendent of refrigerator service. In the billing of refrigerators

all necessary instructions as to re-icing must be given, as well as other instructions affecting the prompt handling of the goods. In case cars are handled without refrigeration service but under ventilation, standard instructions regarding ventilation must be placed on the billing; i.e., ventilators must be closed when temperature falls below freezing point. Or, if it is necessary to protect goods from freezing, a heater may be required to be placed in the car, notice of the fact to be made on the billing. When less than carload shipments of perishable goods are offered and no refrigerator or insulated box car is on hand to receive them, they may often be forwarded in an ordinary box car, subject to transfer to a refrigerator at the earliest possible moment, notation to this effect being made on the billing of the shipments. In loading perishable shipments in the car, special care is necessary; butter, for example, must not be loaded on the top of packages containing eggs; eggs must be stored so that all cases will lie lengthwise, never crosswise, in the car. Fruits, vegetables, eggs, etc., when loaded in the same car with game, dressed poultry, fish, oysters, or fresh meats packed in ice, must be so loaded as not to be damaged by water from melting ice. Cars must be loaded so as to permit a circulation of the air through them. Fresh meats offered for interstate shipment must be accompanied by a proper certificate, the form of which varies accordingly as the shipment is offered by a retail dealer or a farmer. Particulars here must be passed over, the student being referred to tariff circulars covering the matter. The charges for refrigeration are various and must be learned from the tariffs. It is es-

sential that they be assessed and clearly indicated on the billing for perishable shipments. (3) For explosives, cars must be carefully chosen, and must be made perfectly tight; goods must be properly arranged and stayed according to explicit instructions given in special tariff circulars. Cars containing explosives must be so carded (same is true regarding cars containing inflammables). The billing for explosives (and for inflammables) must clearly indicate the nature of the shipment covered by it. (4) Contaminative goods, turpentine, oils, hides, etc., should, if possible, be loaded in a car by themselves, never in cars containing flour, butter, cheese, etc. (5) Fragile goods must be carefully handled and stowed in the car, and billing should show their character. They must be receipted for according to their real nature; the bill of lading must be indorsed O. R. B., "owner's risk of breakage." (6) Goods of special value must be receipted for according to their invoice value and billed correspondingly. (7) In case freight is to be stopped in transit, the receipts for them must show the fact. (8) Goods shipped to be delivered to "shipper's order" must be receipted for on a special form of bill of lading, "order bill of lading," and must be billed accordingly. Such goods must not be billed to one point with instructions to notify consignee at a different point, unless the destination is a prepay station, in which case the shipment should be billed to the nearest open station beyond. (9) Care must be exercised in accepting shipments for prepay stations. It is necessary to collect at billing station all charges on such shipments. On some lines such shipments are billed direct to the destination; on other

lines they are billed to the next open station beyond the prepay station. (10) There is a large number of classes of shipments which, because of their perishable nature or because they are otherwise such that they cannot be disposed of for freight charges, may be accepted only in case all charges are prepaid or guaranteed. Following is a list of such shipments:

Advertising matter.

Chinese, Japanese and palm-leaf fans.

Agricultural implements returned to manufacturers.

School books (second-hand).

Bread, n. o. s. (not in boxes, barrels, or baskets with tight covers).

Liquid carbonic acid in carboys.

Ammonia in carboys.

Fresh fish.

Oysters and clams in barrels with cloth tops.

Green apples, l. c. l.

Green pears.

Fish eggs in casks.

Fresh fruit, c. l.

Live poultry.

Live rabbits in coops.

Game subject to state laws.

Nitrous-oxide gas in metal drums.

Oxygen and hydrogen in metal drums.

Holly branches, evergreen decorations.

Household goods.

Liquid phosphate clarified.

Mineral water, distilled water and phosphates.

Vinegar in carboys.

Fresh meats, n. o. s.

Theatrical properties.

Citrons and melons.

Cabbage.

Goods of small value.

Goods received from connecting lines which will not be worth charges at destination.

(11) To freight destined to large cities and beyond, the following remarks are applicable. Since in large cities there are many different stations on the same line, pains must be taken to ascertain the precise locations of consignees and to bill to the corresponding local station. At such particular station there may be a terminal charge, which must be known beforehand, e.g., \$2.00 per car switching on live stock destined to the Union Stockyards, Chicago. In the absence of express instructions from shippers, different sorts of shipments may require to be billed to different stations (on the same line) in large cities, — freight for team tracks to one station, other freight to other stations; one commodity, e.g., live stock, to one station, other commodities, as hay, potatoes or grain, to other stations. The marking of freight for large cities must be entirely distinct and explicit, including even the street number. Freight for a point which is beyond a large city may have to be billed to a particular station in the city for transfer to a connecting line. (12) Quick-dispatch freight, red-ball freight and time freight are forms of freight which require a special sort of billing, as well as a special handling, the nature of which is sufficiently indicated by the names. A system of coding is used, whereby each shipment is denoted by a special symbol by means of which it is reported at points along the line and traced or expedited in its movement. Cars containing such shipments are especially designated by cards. The shipping agent must be careful to see that such freight — the lists of which are rather too long to be inserted here — is properly billed, coded and carded. Quick-dispatch and “red-ball” freight take precedence

of ordinary time freight. (13) Other classes of freight requiring somewhat special treatment must be passed over here.

Freight having been accepted for transportation must be listed on an authorized shipping bill, known as a *bill of lading*, upon which, besides the articles shipped, must be shown the names of the shipper, of the consignee and of the destination of the shipment; also the weight of the shipment and any special conditions subject to which it is accepted or is to be forwarded. The bill must be signed by the shipper and by the company's agent, the "original" and the "triplicate" (or memorandum) portions of it being delivered to the shipper while the "duplicate" (or shipping order) is retained by the agent.¹ Bills of lading are of two classes, "straight" and "order." "Straight" bills of lading are simple, nonnegotiable receipts for freight accepted. "Order" bills of lading, on the contrary, are negotiable, and the surrender of the "original" *order* bill of lading properly indorsed is required as a condition to the delivery of the property covered by it. This is the special point in which the "order" bill of lading differs from the "straight." But the order bill of lading also forbids inspection of the property covered by the bill of lading, unless such inspection is provided by law or unless permission is indorsed on the original bill of lading given by the shipper. Live-stock contracts may be regarded as bills

¹ Instead of a regular bill of lading, as above described, styled the "uniform bill of lading," it is common to accept the shipping bill of the consignor as a matter of convenience. But this bill should be stamped, "Shipment received subject to the conditions of the uniform bill of lading," or with words to that effect.

of lading for live stock. Very important is it, as a matter of course, that bills of lading should be perfectly accurate in all respects, being in the nature of contracts between shipper and railway company, and the foundation, as it were, of the transportation transaction. Errors of various sorts are, unfortunately, only too common in bills of lading actually issued; errors in name and address of consignee, in the list of goods shipped, in the notations — or lack of such — having reference to the conditions under which shipments are accepted for transportation. An “order” bill of lading *must* not be issued to cover a “straight” shipment; and, as a matter of course, a shipper who knows his business *will* not accept a “straight” bill of lading to cover a “shipper’s order” shipment. Shipping orders retained by agents must be filed as an important part of the station records. Upon them is founded the waybill, or document accompanying shipments to their destinations, and to them reference may be imperatively necessary in case of disputes or claims arising on account of loss or damage to shipment en route.

The *waybill*, founded on the bill of lading and accompanying a shipment to its destination, is in its importance next in rank to the bill of lading, if, indeed, it is not, on the whole, rather more important than that. It is important from various points of view — those of the operative, the traffic, and the accounting departments. The waybill contains, besides the items of information and directions shown in the bill of lading, certain other items intended for the guidance of those handling the shipment in process of transportation. The waybill

may be analyzed into the following parts. In the upper portion of the bill are shown, besides the name of the railway issuing the bill, the names of the billing point (also the point at which shipment originates if that happens not to be the billing point), the point to which a shipment is billed, the date, the series denotation and the number of the waybill, the "initials" and the number of the car in which the shipment is to move, the route of its movement, instructions as to the weighing of the shipment (if a carload), the result of weighing (gross, tare, net) and other less important items. In the middle portion of the bill are shown in separate spaces (1) the name of the shipper or the actual point of origin of the shipment or both (together with reference to connecting line billing); (2) the name of the consignee and of the final destination; (3) the names and number of the articles shipped, grouped according to classification conditions; (4) the weights of the different groups; (5) the rate or rates necessary and authority for the same; (6) the "extensions" showing charges; (7) the charges advanced or already paid to connecting line or on other account; (8) charges prepaid; (9) miscellaneous items of whatever nature, including notations as to the conditions under which shipment is received or is to be transported. At the bottom of the bill (or on the back of it if the bill is small) are spaces containing the impressions of the stamps of the stations at which waybills have been handled, showing transfer points, dates of transfer, etc. On the back of the bill may sometimes be found instructions (addressed to conductors handling the bill) as to the manner of disposing of waybills or

handling shipments. Not all spaces on the bill are necessarily filled out for every shipment, but all have their use on some occasion or other. *Certain* of them are *always* requisite.

According to different purposes for which they are employed waybills are variously classified as follows: (1) small, medium-size, "blanket"; (2) waybills for live stock, for perishable freight, time freight, ordinary freight (different colors often being used to distinguish them, as *red* for perishable freight and time freight, or *green* for time freight, *white* for ordinary freight); (3) local waybills and through waybills; (4) collection waybill, "prepaid only" waybill; (5) revenue waybill, memorandum waybill, astray-freight waybill, card waybill; (6) switching waybill; (7) company-material waybill; (8) freight-train baggage waybill. Some comment properly may be made with reference to a few of these classes. The blanket waybill has special use when a "large" shipment, or shipment containing many articles to be specified, is to be billed; and when there are a considerable number of different shipments having the same destination, it lessens the labor of abstracting bills by reducing their number. Colored waybills have, as such, a value because of the notice which they attract to shipments requiring special attention. A collection waybill is one used, not for billing *freight*, but merely for billing out charges to be collected, such charges being shown in the column for advance charges; and a "prepaid only" waybill is one used merely to bill out charges that are to be paid out or are to be applied on a billing that has already preceded. The revenue waybill is the

regular billing, of whatever sort, while a memorandum bill is something merely improvised to carry a shipment to its destination without reference to any charges. A "stray" bill has about the same use as the memorandum bill, but is better authorized, more accountable than the memorandum, which is not really authorized. The person making a memorandum bill makes no account of it, nor does the person receiving it. A record is made of "stray" billing, both at the billing point and at the point where the billing is received. Many roads forbid the use of the memorandum bill entirely, and with good reason, on the whole, though it is very convenient at times. Stray billing must bear the notation "Do not deliver without surrender of original bill of lading properly indorsed." The card bill has its use in case regular billing for a shipment — usually a carload — cannot be prepared in time to accompany a shipment which must be forwarded without delay. It is a fully authorized form, though to be used only as really needed. Such billing gives the number and initials of the car, the contents, the name of the point of origin and of the destination — merely a few items necessary for the handling of the shipment until the regular bill may overtake it. While theoretically regular billing should accompany every shipment, practically it is found convenient and even necessary to send forward with many shipments merely card bills, allowing the regular billing to follow by mail, this being especially the case at large stations in cities, where freight arrives at the station at a late hour in the day and regular billing for it cannot be prepared until the train carrying the freight is due to leave.

And it may be noted at this point that billing so forwarded may not contain a full record of the handling of the shipment en route, and is in so far defective, viewed from the standpoint of the agent at destination, however complete and correct it may be in the first place. Still, the advantages of such billing or of such a way of forwarding billing appear to outweigh the disadvantages of it, hence its use.

The supreme importance of clearness and accuracy in the making of waybills is surely self-evident: errors and omissions may have the most serious consequence. Without exercise of the greatest care errors and omissions will occur, such as the following: errors in name of consignee, omission of destination, omission of car number, or error therein or in initials, errors in the names of articles billed, omission of connecting-line waybill references, errors in classification and rates, omission of advance charges, omission of notations as to condition of shipments and of instructions of shippers as to refrigeration, ventilation, etc., and very many other shortcomings. It will not be amiss to speak a little in detail of some of the consequences of error in billing shipments. If a bill fails to show the proper number or initials of a car, the car, if picked up by mistake, is liable to be set out en route and delayed until correction of billing can be made. If destination is wrongly written (say *Burlington* for *Burlingame*, for example) the car may be hauled to a wrong destination at the expense of an out-of-line haul of a hundred or two miles and corresponding delay at destination. Misrouting, also, often results in an out-of-line haul

(costing, it may be, hundreds of dollars) and serious delays. Omission of instructions to weigh carloads results often in their arriving at destinations without being properly weighed, causing delivering agent undue trouble and annoyance. Omission of icing instructions might very easily mean a damage to a car of perishable stuff (say eggs or meat), for which shippers would make valid claim for sums amounting to thousands of dollars. A failure to show connecting-line billing reference would bring to the agent a letter from the audit office demanding the missing information. Omission of proper notations giving instructions concerning a shipment for which an "order" bill of lading has been issued might mean a misdelivery of the shipment and a suit against the company to recover the cost of the shipment. In billing carloads, a separate waybill is ordinarily used for each car; but if a single undivided shipment occupies two cars, as, for example, a shipment of telegraph poles might do, a single waybill for the two cars is sufficient. Of all waybills made a record is kept at the billing office, and of waybills going to foreign lines, tissue copies are made for the information of junction-point agents and the auditors of home and foreign lines. The copies filed at the billing office may be tissue copies or carbon copies. Such copies, whatever they be, become the office record of the billing and the foundation of all reports of the billing and of all correspondence regarding the shipment in case any arises. It is unnecessary to emphasize the fact that such copies should be entirely clear and accurate. It may sometimes occur that the copy or impression of a waybill must be taken before

the waybill is entirely complete and certain things have to be inserted in the waybill afterwards; the same insertions should be made in the copy or impression of the bill as have to be made in the original. Any failure in this respect gives unsatisfactory results in case it becomes necessary to refer to the impression at any future time for the purposes of answering tracers or other inquiries. When a waybill has been copied and corrections, if any, inserted in it, it is ready for delivery to the conductor in whose train the shipment covered by it goes forward, or for mailing, either to destination or to an intermediate point where it shall join the shipment, to accompany it thence to destination.

Before leaving the topic of out-billing a remark is perhaps proper as to a practice that seems quite common but is not altogether commendable. There is an established rule that the agent at destination, or the delivering agent, is made responsible for charges finally collected on shipments. The reason of this rule is obvious: the billing of the forwarding agent is necessarily subject to some correction, as the true character of a shipment may not be ascertained until it has been forwarded or until it has reached destination. The delivering agent is the only one who can make the necessary correction. But the necessary existence of the rule does not justify the practice above referred to, which is that of carelessness in the forwarding billing. The delivering agent certainly has responsibility enough to bear without being asked to assume any for the heedlessness on the part of the forwarding agent. That this burden of the latter is considerable, is readily visible in the sorry appearance

often presented by billing, especially from large stations, after it has been revised at destination. And not only is the labor of revision considerable, but the risk of error in accounts, that may be caused by the confused, the mangled appearance of bills after their correction, is also considerable. Much better were it in all respects if billing were made as correct as circumstances would permit at the billing point and only absolutely necessary corrections had to be made at destination.

CHAPTER XVIII

THE RECEPTION AND DELIVERY OF FREIGHT

Checking of Freight against Waybills — Revision of Waybill, Its Supreme Importance — Necessary Steps, Explanations — Final Disposition of Waybills Received — Delivery of Freight, Identification of Strangers, Immediate Collection of Charges, Orders for Delivery of Freight to Others than Consignees, Mailing Notice to Consignee, Circumstances Interfering with Prompt Delivery of Freight, Kinds of Freight Delivery of which Requires Special Care.

ON its arrival at destination freight is immediately checked against, i.e., compared with, the waybill accompanying it, including all the entries that have been made upon it en route and any additional notations necessary to be made at destination. If freight is not accompanied by the regular bill for it, but by an "astray" bill or a card bill, it becomes necessary to take steps at once to procure regular billing, before delivery is made if possible, or very soon thereafter: irregular billing is certainly very unsatisfactory to have to deal with. The regular bill, when received, must be carefully scrutinized and compared with classification and tariff requirements, necessary corrections being made upon it in classifications and rates. If shipment has been weighed en route or if weighed at destination, as may sometimes be clearly required, corrections in the weights shown on the waybill become necessary and, as a consequence, corrections also in extensions, or the total charges arrived at as the product of weight by rate. In particular, bills for car-

load shipments have to be inspected for weight corrections, as such shipments often have to be weighed en route on account of the absence of track scales at shipping points. Bills bearing Weighing Association stamps of course must not be corrected. Inspection of the billing may disclose the fact that certain miscellaneous charges must be added to the billing. The revision of the waybill is necessarily a matter of the highest importance; neglect of it, or inaccuracy in the performance of it, tends directly to loss on the part of the company, on the one hand, or of the consignee on the other. To this must be added the fact of the legal liability attaching to the incorrect assessment of charges; for legislation of recent years imposes a penalty upon any act which might be construed as an attempt on the part of railway companies to rob their patrons by overcharges or, on the contrary, to solicit patronage by indulgent dealing with them in the matter of the collection of charges. The question of collecting correct charges on freight is no longer one of expediency or policy, but of simple accuracy and rightness. For all necessary corrections it is, as has been stated on a previous page, the receiving and delivering agent who is, by the entire nature of the case, rendered especially responsible. This is true in a sense even as regards charges that should have been prepaid at shipping point. Correct charges must be assessed at destination, even though a refund must subsequently be made to consignee on account of evident intent or obligation on the part of the shipper to prepay all charges. To the foregoing a few details may be added as to the steps necessary in revising waybills.

(1) Corrections should be explained when their reason is not self-evident. (2) Advances must not be altered by the receiving agent, but must be corrected by the forwarding agent by the use of a collection waybill, if they are too small, or by a "prepaid only" waybill, if they are too large, these waybills being taken into account by the receiving agent and collection or refund of charges being made as the case may require. (3) If the "prepaid" charges of the original waybill are incorrect, the figures expressing them must not be altered, but the amount lacking must be added to the "freight charges," to be collected of the consignee. If a refund must afterwards be made to consignee, it must have as a warrant for it a "prepaid only" waybill issued by the billing office to cover the amount over-collected at destination. (4) If charges which should have been "prepaid" are in error billed "collect," the agent at billing point must be requested to issue a "prepaid only" waybill to cover the charges. If, on the contrary, charges have been incorrectly billed as "prepaid," a collection waybill will in due course of time be received at destination to correct the error. (5) A "collection" or a "prepaid only" waybill is sometimes used to adjust charges on a shipment which may have gone forward on billing showing neither weight nor charges, though in other respects regular perhaps. (6) Miscellaneous collections must be carefully looked after. (7) It may frequently happen that a regular station, with an agent in charge, will have to accept and treat as it must treat other billing the bills for freight delivered to consignees at a "prepay" station in its neighborhood. The charges

on such bills must, according to a well-understood rule, have been "prepaid." If they are not so, it is necessary to make them so, — contrarily to the ordinary procedure with regard to charges in the "prepaid" column. A "collection" waybill to cover the charges that should have been prepaid may be issued against the station billing the shipments, or such station must be requested to issue a "prepaid only" waybill to cover such charges. It may be convenient sometimes, however, to make collection of the consignee; but no responsibility for so doing rests upon the agent at destination of waybill.

(8) It may sometimes occur that corrections must be made in waybill charges after the waybill has been placed on record, charges having been collected. Here two cases arise. (a) If a final report of the waybill has not been made (at end of week or month), correction of charges may be made, all records being corrected correspondingly. (b) If a final report of the waybill has been made so that the matter of correction has passed beyond the station's control, a correction may require to be made on the basis of instructions received from the audit office. These two forms of corrections are known as "supplementary corrections." Much care is required in handling them properly. Something will have to be said regarding them later. When revision of waybills has been completed, copies — three in number — are made, to serve, first, as office record; secondly, as a bill against consignee and receipt for charges paid; thirdly, as a receipt signed 'by' consignee for goods delivered to him. This having been done, the waybill, the date of its reception at the station having been

stamped upon it, is ready to forward to the audit office, or to be filed away at the station, as may be required by the rules of the company. In case bills must be sent to the audit office, it is perhaps well enough — and the practice is pretty generally followed — to hold them at the station for a few days, in view of possible corrections from billing offices. It may be added that in any case, and always, waybills should be handled with care and not allowed to become lost or mutilated or defaced.

The proper delivery of freight, a simple matter though it may seem, is sometimes rather difficult and even impossible, and is always of great importance. In normal circumstances it consists in turning over to the consignee the articles addressed to him, taking his receipt for the same, collecting charges, if any, *at the same time*, and giving him a receipt showing that charges have been paid. In actuality there are many circumstances interfering with this very simple procedure. It is necessary to consider the entire matter — this crisis and culmination of the transportation process — in some detail. A notice must promptly be sent to consignee of the arrival of his freight. The consignee on receiving the notice, or because expecting goods, may himself call for them or else send some one in his place to get them. If he is not personally known to the agent he must, in order to get his goods, be satisfactorily identified and must pay freight charges. If he be an entire stranger in the community, identification may or may not be easily accomplished: the agent has no right to be satisfied with mere assertions or plausible representations, but must *investigate*, make *inquiries*, regarding the consignee's business

and connections, have him exhibit correspondence, describe the contents of the shipment held for him, and must be prepared finally to refuse to deliver the goods if the evidence furnished as to ownership be not satisfactory. Thoroughness in this particular business is altogether desirable and necessary. Any one sent for the goods by the consignee must have written authority from him to receive the goods and should be known to the agent or required to identify himself. In case the person who is sent is in the permanent employment of the consignee and calls frequently for freight, the agent should require consignee to place his signature on a form, in regular use in such cases, whereby a certain person is formally authorized to call for and receipt for freight addressed to the consignee. The requiring of the execution of this form by the consignee should in no case be neglected by the agent. And the agent must be careful to see that his warehouseman, who makes the actual delivery of freight, knows what persons are authorized to receive freight for consignees not themselves calling for freight. And in any case it is well enough for the warehouseman, unless he *knows* that it is not necessary to do so, to require persons to whom freight is to be delivered to exhibit to him the receipted expense bill covering the shipment to be delivered, he declining to deliver freight without that. Trouble occasionally is experienced in dealing with persons — mostly draymen or teamsters — authorized to haul freight for consignees. A certain sort of such persons are habitually dilatory in calling for freight and paying to the agent the cash due on the freight. It becomes necessary for the agent or his

cashier to make complaint to the consignee of the conduct of the drayman, and if faults are not speedily remedied, to refuse to deliver freight to such drayman without immediate payment of freight on delivery, just as any ordinary casual consignee would have to do. Unless this be done, the cashier will be having continual trouble and annoyance keeping his daily cash matters straight and keeping his books free from erroneous entries and erasures; and the warehouseman, instead of making immediate delivery of freight from the cars or the platform, will have the extra labor of trucking the freight into the house and disposing of it there along with other stuff awaiting delivery. It has already been stated that a written notice should be mailed to consignees of the arrival of their freight. This is particularly necessary when consignees are not known or when they reside in the country. And this is a matter not to be neglected. An entry should be made on the station record of bills received, showing the date of mailing the notice. This entry will serve a number of purposes: it will assist in the determination of storage, will tend to obviate dispute in case consignee should claim delay in the arrival of freight, etc. If the mailing of the notice be neglected and the consignee does not expect the freight and call for it, a delay in delivery occurs, and even a failure to deliver may occur if the consignee concludes that the freight has arrived too late to be of value to him. If he refuses freight, for whatever reason, the company has goods on hand to dispose of, the freight house receives an addition to its undelivered stock, and the agent has an addition, most likely, to his list of uncol-

lected bills. The consignee himself has cause for dissatisfaction with the railway company and may determine to ship in the future by some other line. Even when the agent is not at fault in the matter of notifying consignees, delivery may be rendered impossible for the time being, or entirely, by the condition in which freight arrives. Refusal of the freight may sometimes be obviated if consignee can be persuaded to take freight and make claim for the amount of damage or loss suffered by him. But there are many circumstances which render it impossible for the agent to make delivery of freight even by putting forth the best possible efforts. It is worth while to consider these, because if the agent is unable to make delivery he ought to be able to understand the causes or reasons of the failure in order that he may suggest proper remedies to those able and prepared to apply them. (1) It may happen that the goods received for delivery to consignees are not what were ordered by them from shippers, and consequently they are refused. Here the agent and the company are merely the blameless victims of the shipper's inefficiency or carelessness, and all the agent has to do in explaining the nondelivery of shipments is to say so. If the agent can induce consignee to accept the goods or can assist him in disposing of them, that is so much to his pure credit. (2) Goods may be erroneously marked, and in consequence shipped to the wrong destination or addressed to the wrong person. If shipped to the wrong destination, they may get delivered at the proper one either not at all or only after a long delay. If addressed to the wrong person or to an unknown consignee, delivery

is delayed or rendered impossible; and if the goods happen to be perishable (say a car of melons) they may have to be disposed of at a great sacrifice in value — sometimes for not enough to pay freight charges; or goods not perishable may remain on hand indefinitely, the agent meanwhile having imposed upon him the duty of learning (if possible) by correspondence with the shipping agent or with the shippers themselves the whereabouts of the consignee, as well as the duty of keeping a record of the shipment and of his efforts to effect delivery of it. Many errors interfering with the proper delivery of goods are committed, not by shippers, but by the agent (or assistants) at the shipping station, through inaccuracies in billing already spoken of or through failure to have goods properly marked. Again, goods are often mishandled en route by trainmen or by transfer clerks, and so fail to arrive in proper time or in proper condition or they become irrecoverably lost. The agent, however, has billing for them and is the recipient of inquiries regarding them from anxious and dissatisfied shippers. A frequent cause of delay, if not of entire failure, in delivery is the fact of excessive charges, causing consignees to refuse to accept freight. Such overcharge may be due to no fault of the agent at destination and may not be remedied by him conveniently, if at all. Agents are not infallible, and overcharge is not entirely avoidable. An agent at destination, if uncertain as to the proper charge, will, to protect himself, charge too much rather than too little, since it is easier to refund overcharges to consignees than to collect undercharges from them. In case of alleged overcharge, the agent will do well to

try to persuade the consignee to accept a shipment, pay the required charges on it, and then put in a claim for overcharge, if such exists. Such claim, if just, will in due time be allowed. If the agent accomplishes this result, he does something to keep down the amount of uncollected freight charges and to keep his warehouse from being encumbered with unclaimed goods. Delivery of a shipment refused on account of overcharge may sometimes be made if agent assures consignee that the overcharge (a small one) will be compensated by a like undercharge on a future shipment. If this can be done, it may save a little trouble and annoyance in correcting records. Particular care is demanded in making delivery of "shipper's order" shipments. The bill of lading properly indorsed *must be* in the hands of the agent when the shipment is delivered. Delay often arises in delivering such shipments because the consignee fails to take up the bill of lading at the bank, the agent justifiably refusing to let the shipment pass out of his hands until bill of lading is surrendered. In regard to such shipments there is but one course to pursue; namely, the course of absolute security, whether shipments get delivered or not. There should be no confusion of thought, no wavering of judgment or will on this point. The tender of cash to cover the alleged cost of shipments forwarded subject to "shipper's order" cannot properly be recognized by the agent. The station is not a general collection office; it has no forms nor methods pertaining to the collection of the cost of shipments, except this one of requiring the surrender of the bill of lading. Even if money were paid by the consignee to secure it, the agent

would have no way of disposing of it; he would simply have on hand so much extra cash for which he could render no account. A visiting auditor could only criticize or reprimand the agent for being "over" so much cash — which he ought *not* to have in his possession — and being "short" the bill of lading which he *ought to have*. It remains to add to what has been said, that, in general, the classes of freight which require special care when offered for shipment, require a similar care to be exercised in regard to their delivery. Shipments of live stock must, on arrival, be turned over promptly to the consignee, or if this can not be done — if, for example, they are in bad order and are refused, — they must be cared for; i.e., fed and watered as if they were the personal property of the agent, the expense of such care being charged against the shipment and collected along with regular freight charges when the shipment is finally delivered. The condition of the stock must be carefully noted and a record made thereof. Perishable shipments must be immediately delivered, or if refused by consignee must be fully protected, if possible, or must be disposed of to best advantage, disposition having been requested by wire of the shipping office, or, in case of carloads, of the general claim agent. But it does not seem necessary to go further into detail at this point. We pass now to a topic which bears the closest possible relation to that we have just been discussing.

CHAPTER XIX

"SHORTS," "OVERS" "BAD ORDERS," GOODS ON HAND — UNCLAIMED AND REFUSED FREIGHT

Shortages, Real and False, and their Causes — Records and Reports of Shortages, Tracing of Shorts — Overages, on Stray Billing, Without Billing, Securing of Regular Billing, Disposition of Overs Plainly Marked — Records and Reports of Overages, Final Disposition of Unclaimed Overs — Bad Orders, Disposition of Perishable Goods in Bad Order, Bad-order Reports — Goods on Hand Refused or Unclaimed.

WHEN billing for a shipment arrives at destination, while the shipment itself or some part of it fails to arrive, a "shortage" occurs. The goods that fail to arrive are called "short" and the station is said to be "short" the goods. Goods are improperly called "short" when, though expected and called for by the consignee, no billing reaches the agent against which they may be checked "short." Consignees often complain that they are *short* and call the agent to account for not delivering goods which may have been ordered by them from a shipper but which have never really been shipped, the shipper not having the goods in stock or carelessly neglecting to forward them as ordered. The agent is in such cases called upon to distinguish carefully a real and a so-called shortage. It would be quite unreasonable that the company should be held accountable, on the alleged ground of poor service, for not delivering promptly or at all something that was never shipped at all. "Shorts" arise from the following causes: (1) Shippers

fail to forward all the goods which they may bill out, the omission being overlooked by the agent at shipping point. (2) Agents at shipping points sometimes fail to load all that is offered for shipment and is billed out. (3) Shipments are mishandled en route, one portion of them getting separated from the remainder and from the billing for the shipment. (4) Articles are lost outright or are stolen en route, cars being left unprotected. (5) Many articles check "short" merely from oversight or carelessness in checking. (6) Articles are often reported "short" when agents fail to note that goods which at first fail to arrive, arrive subsequently. Human nature being subject to error, such causes of shortage in shipments cannot be entirely eliminated; but constant vigilance may and should be exercised to keep the number of shortages as low as possible.

Shortages occurring should be immediately noted on the waybill, though not formally reported for, say, forty-eight hours, since they might by the end of that period be canceled by the arrival of goods short. It is a good plan, however, to give immediate notice of shortage to conductors of trains from which goods are short in order that, if possible, they may discover the goods and arrange to send them back at the earliest opportunity. Formal reports of shortage are made by filling out forms already prepared for the purpose, calling for the following items of information: number and date of the waybill covering the shipment from which goods are short, destination, name or number of train, including name of its conductor, by which the shipment was transported, initials and number of car from which goods checked

short, the transfer points indicated on billing, the name of the consignee, the seal number and letters on car on arrival, value of the freight short, etc.; also the following items, which, however, have to be inserted by the forwarding agent to whom the form may be sent: number and conductor of train by which goods were forwarded, articles billed, how long after shipment was loaded car was sealed, for what other stations *similar* freight was loaded, for what other stations was freight loaded; seals, numbers and letters on car on departure, etc. The formal short report is made in triplicate (or even in quadruplicate, it may be) and copies of it are forwarded to various officials, as the shipping agent, or else the agent at the point where the shipment in question last checked in full, the division superintendent or train master of the section of the line which handled the shipment, the general claim agent of the road. A copy is also retained in the office as a permanent record. All the officials named are directly interested in the shortage, for the good of the company's service in general, as well as on account of the individual shipment itself. Correspondence regarding the shortage is begun for the purpose of tracing the shipment and locating the article (or articles) short. If found, it is forwarded to destination and the shortage is canceled or "closed." If the shortage is not closed, the consignee who has paid freight on the entire shipment, if only a part of it be short, will be expected to make claim to cover the shortage. If an entire shipment is short and no freight has been collected, then it becomes necessary for the agent to make an entry on his record of uncollected bills and so protect

the charges made against the station. It is quite necessary that the "short" record be full and correct, so that in case of dispute or claim all necessary data for a proper investigation may be available. "Prevention" of shortages is much better than a "cure" for them. This is possible only by means of a vigilant and efficient station service and train service. Shortages, in fact, are a good indication of the kind of service which a railway maintains.

An "overage" occurs when a shipment is found at destination without proper or regular billing against which it may be checked. A shipment may be "over" without billing or on "astray" billing. Regular billing for an "over" may have preceded it; if so, the overage ceases to exist, or is canceled, by merely checking the article "over" against the regular billing, thereby at the same time canceling, of course, an existing shortage. This is a case of very frequent occurrence, although agents may sometimes fail to note the connection between an overage and a bill previously received. An overage becomes properly reportable if after forty-eight hours no regular or proper waybill for it has turned up. It is a good plan, when an overage occurs, to arrange at once to locate or to procure regular billing, instead of using an astray bill with added weight and charges in accounting for a shipment. A "stray" bill cannot be depended upon for the information necessary for the safe and proper assessment of freight charges. If charges are collected by means of a "stray" bill and a regular bill arrives thereafter, then its charges must be disposed of by being canceled entirely by a reference to the stray billing or

by means of a claim for relief made upon the claim agent or the overcharge auditor. In either case there result extra trouble and some risk of error in accounts. Generally speaking, "overages" are merely the converse of shortages, and their causes are identical with those of shortages. But overages *may* occur when no billing has been issued. A shipper sends to the station a lot of goods which are imperfectly listed and get forwarded on incomplete billing, the warehouseman at the forwarding station failing to check thoroughly. Some shippers are in the habit of leaving goods at the station for the warehouseman to discover and to prepare billing for. Such goods are apt to get overlooked in part, it may be, and some of them go forward without billing. Cases in which goods are forwarded without any billing whatever are naturally troublesome, as the shipping agent has in his possession, as a rule, no data on which to base billing which may be required at destination. In case an agent *knows* that goods have got away from the station without billing, he may wire conductors or the agent at destination to be on the watch for them, and so prevent their entire loss, perhaps. "Overs" discovered en route may, if properly marked, be billed to destination by any agent along the line. The difficulty in such cases appears to be that agents often fail to feel the proper interest in shipments that do not belong at their stations and "overs" may lie neglected at points along the line, reaching their destinations very tardily or not at all. "Overs" improperly marked, or not marked at all, have to be held for instructions from the general claim agent, unless it may be possible, perhaps,

to ascertain the proper consignee and destination of the goods by corresponding with the shipper or by opening the package and examining its contents. A very embarrassing case is that in which "overs" arrive at destination and get delivered to consignee without being noticed by the agent at destination. In such an instance the agent first learns of the overage by a claim for loss, sent him from the general claim agent's office for purposes of investigation, the agent, of course, having no knowledge whatever of the shipment. The formal "over" report must furnish such items of information as the following: number and date of "stray" waybill on which "over" was received, number and initials of car received in, number of train, date of its arrival and name of conductor, origin of shipment (if known), names of shipper and consignee, marks on shipment, list and weight of articles over, estimated value of shipment, seal record of car in which goods were received, and other important items which may be available. Copies of the report go to officers concerned in the shipment. "Overs" not finally disposed of at destination are so reported to the general claim agent, who eventually gives final disposition for them. The charges assessed on such shipments naturally remain uncollected and have to be so reported on the list of uncollected items. The agent who takes a proper interest in keeping the list as small as possible feels a positive interest in getting disposition from some source or other for all "overs."

Bad-order shipments, or "bad orders," must, as soon as received, be immediately and carefully studied, as to the nature, extent and causes of the damage that

exists, proper notations being made on the billing received for them. If they are of a perishable nature and are refused by consignee, immediate disposition must be arranged for them, in order to prevent loss to the company or to the shipper. Neglect of this may be regarded as inexcusable. Disposition may be obtained by wiring the shipping office or the general claim agent or both, according to the importance of the individual case. Goods not perishable may be disposed of more at the convenience of the agent and by means of correspondence. The formal "bad-order" report is of the following nature: it must show the number and conductor of the train carrying the goods, billing point, date and number of waybill for the goods, initial and number of the car in which goods were moved, names of transfer points en route, nature of damage, probable or supposed cause of the damage, estimated amount, when and by whom the bad order was discovered, seal record of car in which the shipment was handled, etc. Some lines dispense with the formal bad-order report, requiring in its stead a special letter addressed to the claim department stating fully all the circumstances pertaining to bad-order shipments and their handling, the object of the required letter being to elicit a more real and less perfunctory account than the formal report alone might furnish.

From the array of "overs" and "bad orders" received there may, after all proper effort to obtain disposition has been made, be a residue of goods on hand unclaimed or refused. These have to be fully reported to the general claim agent, to be finally disposed of

according to instructions received from him. The uncollected charges for such goods are also held for disposition. Each item becomes the matter of a claim and tracer which have, so to say, to be *ground through a mill* of correspondence, sometimes very elaborate and tedious, until the station's records in relation to them are cleared and closed. Pending the final disposition of them the goods remain, stored in proper order, in the warehouse, having been properly tagged or marked for their complete identification. Some of them, it may be, are ordered sold at destination; and if so, there will be proceeds of sale to be properly reported and accounted for. On the whole, such matters, though mere "odds and ends" of freight service, require much attention and care in their proper execution; and the way in which they are handled by an agent, affords a good index of his methods in general of conducting his station.

CHAPTER XX

TONNAGE AND EARNINGS REPORT

C. L. Freight Forwarded; C. L. Freight Received: Number of Cars of Each Commodity — L. C. L. Tonnage Forwarded and Received — Comparative Table of Total Tonnage and Earnings of Freight Forwarded and Received, Each Shown Separately — Explanations — Separate Report of Tonnage and Earnings of Freight Interchanged with Other Lines — Agent's Record of Business Done by Leading Shippers with the Company — Difficulties of Tonnage and Earnings Reports.

Of the freight business done by the station each week, month or year, reports are made to the central freight traffic offices. As a foundation for such reports the agent does well to keep a record from day to day of carloads forwarded and received, the record showing correctly the following items: for forward business, name of consignor, destination of shipment, contents, weight and charges; for business received, name of point of origin, name of consignee, contents, weight and charges. At the end of the month this record may be totaled, and the total of less than carload shipments may be added to it. It will serve a variety of useful purposes. The reports drawn from it for the central freight traffic offices comprise the following items of information: (a) number of cars forwarded and received, (b) kinds of commodities shipped, (c) points of origin, (d) destinations, (e) name of consignor (of freight forwarded) or consignee (of freight received), (f) total amount of charges. To this must be subjoined a summary of the

carloads of each commodity. This statement is made in comparative form, showing two successive years in juxtaposition, increase or decrease being hereby easily determined and exhibited. The totals of less than carload business may also be shown in the report. The information given may be compiled in three or four different tables, one showing merely the total carloads of each kind of commodity forwarded and received; another showing the number of carloads of each commodity forwarded, the consignor and destination of each, the items being grouped alphabetically according to destinations; a third table showing the number of carloads of each commodity received, the point of origin and the consignee, the items being grouped alphabetically according to points of origin of shipments; a fourth table showing tonnage of less than carload shipments forwarded and received; a fifth table showing complete totals of tonnage and earnings. To these should be added, in the annual tonnage and earnings report, tables showing the principal shippers of the station, the leading industries and manufactures, etc. The annual reports would naturally be compiled by means of an analysis and summarization of the monthly statements. Junction stations would make reports of business interchanged with connecting lines, according to the above given pattern. For their own information and use, agents should compile statements of business done by each leading shipper at their stations. Such statements would have value not merely as matters of information, but also as indices for the agent and the company in their treatment of their patrons. While unjust dis-

crimination between shippers, on the part of railway companies, is expressly forbidden by law, occasions sometimes arise on which it seems entirely legitimate to offer to loyal patrons advantages which one would not think of offering to patrons who, while favoring the company now and then, are, as a rule, habitual enemies of it and its interests. The compilation of reports for the general offices is one requiring more than usual care and analytic attention. The forms supplied to agent to fill out are necessarily general in their nature, and while adapted it may be to certain stations or classes of stations, fail, as it were, to fit closely the conditions at many stations. The consequence is that much valuable information is buried in indefinite forms of statement, and it may easily happen that what is really characteristic in the business of a station never becomes fully known at the central traffic offices. The kinds of commodities mostly shipped may be such as are not specified in the forms furnished, and have to be reported under some general or indefinite name as "other," "miscellaneous" or "sundry" loads. Care should be taken to obviate this difficulty as much as possible. The meaning and value of the general tonnage and earnings reports are perhaps not sufficiently understood and appreciated by agents, and there is lacking to some extent the proper incentive to their accurate compilation. This would naturally be the case, inasmuch as the meanings of such reports would be fully apparent only to one situated, so to say, at the center of a railway system and compiling a single comprehensive table of all such reports. From *such* a table one would derive definite knowledge of great

streams of traffic flowing to and from leading commercial centers, knowledge of the characteristic nature and the amount of the business done by the system as a whole. Knowledge of this sort would tend to allay much of the dissatisfaction which is apt to accompany the preparation of such statistical tables as those above outlined. The lack of this knowledge is simply one of the inevitable disadvantages of a merely local, narrow experience, disadvantages which may in part, at least, be overcome by a study of the general principles of railway operation or of the railway as a system.

CHAPTER XXI

PASSENGER TRAFFIC

Peculiarities of Passenger Traffic — Passenger Officials — Passenger Classification, "Superordinary," First-class, Second-Class, Extraordinary, Explanations — Passenger Tariffs and Rates, Tariff Circulars — Tickets, Description, Classification, Local and Interline, Card, Book, Simplex, Mileage, Coupon — Exchange Orders — Prepaid Orders, etc. — Ticket Supplies, Ticket Cases, Punches, etc., Necessity of Carefully Keeping up Supplies — Execution and Selling of Tickets, Stamping, Cutting, Punching, Collection of Fares, Likely Errors, Detection and Correction of Errors — Daily Balance of Sales — Baggage, What it Consists of, What is *not* Included — Baggage Checks, Ordinary, Excess, C.O.D., Storage, Explanations — Rules to be Observed in Handling Baggage — Miscellaneous Matters — Record of Ticket Sales, Analysis of Ticket Register — Passenger Earnings Report Made to General Passenger Department.

PASSENGER traffic has already been distinguished from freight in a general way as having to do with persons as opposed to things or property. But along with mere persons must, as we have seen, be included such of their personal belongings as are immediately related to their comfort or convenience in making a journey; also pet animals (as dog or bird) and corpses. As compared in amount with freight traffic, passenger traffic is not large, but of subordinate consequence, and may be much more briefly handled in discussion. It demands a service which is peculiar in its nature and importance. What has been said of freight matters will apply here only in a small degree. In this traffic what is transported is

human beings themselves with their personal effects, not merely quasi-human articles, and conditions have to conform closely to their nature. The shipper is here also that which is shipped. What is loaded and unloaded, loads and unloads itself; the charges collected for the service performed must, in order to insure collection, be collected before transportation occurs. Provisions have to be made — and charged for — looking directly toward comfort and convenience, safety and speed in transportation. The bill — the ticket — issued to cover the transportation of that which is moved has also a character of its own, is quite unlike the freight waybill. Passenger traffic classifications and rate tables are much simpler than freight; weight comes into consideration only in connection with baggage, and that with *relative* infrequency. The earnings of passenger traffic are but from one-fifth to one-third of those of freight traffic; and it appears that on some (Western) lines passenger traffic sometimes has its justification only as an auxiliary of freight traffic. The time and attention demanded at the station by passenger traffic are probably not one-fifth of those demanded by freight traffic. The rules of passenger traffic extend to freight trains carrying passengers, except so far as baggage is concerned and so far as the stopping at the station to let passengers dismount. The passenger traffic officials with whom the agent has to deal are chiefly the general passenger agent and the traveling passenger agent.

Beginning the particular discussion of the subject with the topic of classification, we note first the distinction already made of articles of passenger traffic into

passengers, baggage, corpses and pet animals. According to differences of service, passenger traffic may be classified as: superordinary, first-class, second-class, extraordinary, including colonist, excursion, tourist, special, deadhead. By "superordinary" transportation is here meant the so-called "limited" transportation, or transportation on "limited" trains, which involves somewhat special conditions as to speed and the gratification of passengers, as well as also, sometimes, the charge made for services performed. First-class transportation is the better grade of ordinary transportation. Second-class transportation involves some restriction as to comfort, speed, stop-over privileges, sleeping-car privileges, etc. The differences denoted by the terms "colonist," "tourist" and "excursion" are differences as to the time during which transportation is in effect, as to rates, etc.; while the differences denoted by the term "special" refer to the persons transported, as employee, child, clergyman, government official. The term "deadhead" distinguishes transportation for which no charge is made from that which yields a revenue. Transportation may further be distinguished as "one-way" and "round-trip," terms which do not need explanation.

Passenger rates differ according to the classes just mentioned, also as being either local or interline, as being mere "flat" rates, distance rates, or what may be termed constructive rates, involving a "basing" rate and an arbitrary amount added thereto. Passenger rates and rules of application of them are issued in tariffs and tariff circulars, corresponding in a way to the freight

tariffs and tariff circulars already discussed. Like the freight documents, they require to be closely studied, and carefully filed for ready reference. The circulars relating to tourist, excursion and colonist rates are quite constantly undergoing change, more or less, and need particular attention. Failure in regard to these is very likely to result in severe loss to the ticket seller. The regular tariffs are more permanent in their nature. Local tariffs are found in tables issued by each separate company; "through" rates are covered by joint tariffs, applying to extensive territories and issued under the auspices of various passenger associations. Passenger tariffs and tariff circulars are subject to public inspection similarly as are the freight tariffs and tariff circulars.

The bills issued to passengers for themselves and their baggage, including corpses, are known as tickets and checks. A ticket shows the points of the beginning and the ending of the transportation of the passenger; it has a certain form number, distinguishing in a sense its class, and an individual number separating it from all others of its class, and it must be dated when issued. When necessary it must show the route *via* which transportation occurs and the names of the railway companies concerned in the route; also, when necessary, it bears on its face devices for showing the limit of time within which it must be used, and explanations as to the conditions under which it must be used. Unless otherwise especially provided, tickets are good only for continuous passage, beginning within one day from the date of purchase. The primary or most important distinction in tickets is that between local and interline, or coupon,

tickets, a local ticket being, as the name indicates, one that is good for transportation only on the line or lines of the road issuing it, an interline ticket covering transportation over two or more lines. In its form the local is naturally rather simple; the interline may be quite complex. The local one-way ticket has never more than two parts — very often is indivisible; when there are two parts, one is retained at the station, temporarily at least, the other, of course, being given to the passenger. An interline may have as many as six or eight parts, two of which at least are detached by the agent, the remainder being delivered to the purchaser of transportation. The leading varieties of the local ticket are: (1) the card ticket, (2) the book ticket, (3) the simplex ticket, (4) the mileage ticket. The card ticket is a simple card having merely to be dated when sold. Card tickets, being easily executed, are used in preference to other forms whenever a large number of tickets is sold to a single destination. The book ticket, so-called because bound in a book containing a multiplicity of tickets, is a ticket that has to be executed by filling in certain details of the ticket itself and of a stub, from which it is torn, generally the destination merely, and by stamping both ticket and stub. The ticket is handed to the passenger, while the stub remains as basis for the agent's ticket record. The simplex ticket is a form in less common use than are the card and the book ticket. It is distinguished by having printed upon its face, and that of the stub to it, the names of a number of destinations and by having to be cut or clipped (by means of a specially designed implement, a "simplex cut-

ter ") so as to indicate the destination of the passenger purchasing the ticket. The execution of the ordinary simplex ticket consists merely in cutting and stamping it. (A "special" ticket must be punched to indicate class of passenger. A "round-trip" ticket must be punched to show its final limit and *may* require to be signed.) When there is no "rush" at the ticket window, the simplex is very convenient for general use. Care must be exercised in cutting the simplex ticket so as to show positively the required destination; care is also required to avoid taking more than one at a time from off the hook. If an error is committed in cutting a ticket the whole must be marked "void" and a new ticket issued instead. The regular one-way ticket (full rate), the "special" ticket and the "round-trip" are distinguished by colors, as blue, yellow and red respectively, and the different *forms* of each are distinguished by numbers and letters indicating the initials of names of stations grouped together on the ticket.

The mileage ticket is a small book containing a folded strip of paper marked with numbers in a series extending to 1000 or 2000, as the case may be, used to denote the number of miles traveled by the holder of the ticket. For each trip made the holder surrenders to the railway so much of the strip as will indicate the number of miles traveled by him. Such tickets are designed to serve the use of passengers who travel much and do not always find it convenient to purchase tickets. (Formerly they were sold at reduced rates and were much used; discrimination in ordinary rates being illegal, they are less in requisition now.) When sold they must be

stamped with the station dater and signed in ink by the purchaser. They are good for use for one year from the date of sale; and if at that time any portion remains unused, a refund of an equivalent amount of money may be obtained.

Coupon tickets are formally classed as "straight," as "feeder" and as "extension" tickets. To these may be added, when tickets have to be irregularly constructed, "improvised" or "emergency" tickets. The "straight" ticket is a ready-made complete coupon ticket requiring merely to be dated and punched to be usable, no coupons being added to or subtracted from it. It consists of one or two stubs, one "contract" and two or more coupons. "Feeder" and "extension" forms are complementary to one another, requiring to be combined in the *construction* of a *new* ticket. The extension constitutes the main portion of the ticket, containing the contract, which must be signed by the passenger, and a coupon good for transportation from a certain junction point to the destination of the ticket; while the "feeder," consisting of one or more coupons, is pasted or glued to the extension form. What we have called "improvised" or "emergency" tickets are also composite, but are constructed by the *dissection*, as it were, of regular coupon forms and combining needed portions into a required form of ticket, the unused portions of tickets being treated and accounted for as "void." This form of ticket becomes quite necessary, and common in fact, when tickets are needed for special excursion business, such as the "home seekers' excursions" give rise to. Naturally, the construction of them presupposes a

thorough knowledge of tickets and of passenger routes and territories; and also of the established rules and regulations as to the limits of tickets ("going" and "return") and as to stop-over privileges, side trips, etc. The labor of constructing such tickets requires a considerable amount of time, and they should be arranged for beforehand by purchasers, as it is often impossible to prepare them within the time — thirty minutes — usually allotted to selling tickets. Coupon tickets are either "one-way" or "round-trip" tickets.

A class of ticket which is printed either as a local form or, again, as an interline form, is known as the "exchange order." This is used in drawing an order upon a distant agency for transportation which cannot be directly furnished at the selling office, the passenger paying fare through to destination when he receives the order. Along with the order is furnished a ticket reading from the starting point to the point where the exchange order is surrendered for the ticket which is to carry the passenger to his destination. Instead of an exchange order what is termed a "prepaid order" may be used; but the "prepaid order" is primarily designed to be used in ordering at *destination* a ticket to be furnished to a passenger at a given starting point. "Prepaid orders" are of two kinds, "local" and "interline." In exchange orders and prepaid orders there is, in a sense, a combination of the characteristic qualities of the local and the interline tickets.

Many varieties of tickets are necessarily here passed over. Actual acquaintance with ticket stocks, local and coupon, are necessary for the formation of clear and

complete conceptions of the existing multiplicity of ticket forms. We close this discussion by noting that sleeping-car tickets are not commonly on sale at small or medium-sized stations, but berth reservations must be ordered by wire. At the larger ticket offices there are, it is scarcely necessary to say, separate windows for the purchase of sleeping-car tickets.

We pass now to the matter of ticket supplies, ticket cases, daters, punches, etc. Small stations are supplied with local tickets and perhaps a few interline forms. If they have a call for interline tickets they must order them from larger offices, using the prepaid order in so doing. At the larger offices there is, in addition to local tickets, a supply, larger or smaller according to the importance of the station, of coupon tickets and miscellaneous forms. Punches and daters are furnished for use in executing tickets: a "round punch"; an "L punch," to designate limit of ticket; a "B punch" for baggage; a ribbon dater and a perforator as may be required. A single, small "local" ticket case suffices for a small station. At large stations a coupon case is also needed. At the largest stations a number of each kind may be required. Tickets must be arranged in their cases according to some regular plan in the order of their form numbers. There is little or no time, during the half-hour for selling tickets, to spend in hunting up the proper forms, to say nothing of the fact that orderliness is better in every way than disorderliness. If tickets are properly arranged, "one-way" forms will be separate from "round-trip," and "straight" tickets from "feeders" and "extensions," etc. The supply

of tickets must be carefully kept up in every important particular by ordering "ahead of time" sufficiently. This necessitates a constant supply of requisition blanks. An accurate record of tickets received is essential. This may be kept by taking copies of the invoices and preserving them together for safe and ready reference. A similar record should be kept of all tickets returned to the central offices. The invoice for tickets received must, after copy is taken, be forwarded, not to the general passenger and ticket agent's office, from which the tickets were received, but to the office of the ticket auditor; to the same office are also sent the tickets that must be returned from the station. These steps are necessary in order that the station may not be improperly credited or debited with tickets, since every single ticket must be fully accounted for. Ticket cases, with their contents, require a vigilant care, to prevent not merely actual losses but also errors in the accounting for tickets, misplaced tickets easily causing much trouble.

In the proper selling and execution of tickets there is presupposed or required a knowledge of numerous things, — of classification, tariffs and tariff circulars, of forms of tickets necessary, of territories, lines of road, junction points, time-tables, service afforded — chair car, parlor car, sleeping car, dining car, tourist car, etc., etc. And the knowledge necessary is of a thorough, ready sort. Many things must be learned outright, and of other things one must know where to find at once the sources of information. The self-confidence and self-control which accompany thorough familiarity in knowledge are among the best qualities of the ticket seller.

The courtesy and patience necessary to the ticket seller are proverbial. Many persons traveling are ill informed, suspicious and nervous, scarcely knowing what they wish or what they do; unable to see, and unwilling to acknowledge, mistakes of their own making, even inclined to quarrel at the ticket window. A single person of this type may on a busy day task the peculiar virtues of the ticket seller to their utmost. Errors made in ticket selling are apt to be expensive ones, and are often not correctible, because ticket customers are apt to be merely transient, not accessible after leaving the ticket window. Errors may, it is true, if discovered in time, sometimes be corrected by wiring conductors of outgoing trains on which passengers have taken passage. To discover and correct errors it is a common practice of ticket sellers to "check up" their sales immediately on the departure of trains. In the sale of tickets there are a few simple steps regularly to be taken. The ticket is first taken from a certain fixed place in the case, then stamped, and, if a card ticket, handed to the customer, his money being taken previously, so that proper change, if any, may be returned with the ticket. In selling book tickets the proper insertions should be made in both ticket and stub and both should be stamped before ticket is torn out to be handed to the passenger. Simplex tickets should be stamped on both parts before being cut. This insures the stamping of both parts, or is more likely to insure it than would otherwise be the case. Cutting more than one simplex ticket at a time is sometimes very advantageous, but must be very skillfully done to be successful. In handling simplex tickets the error

of picking more than one ticket at a time may be committed, as has been stated. If not discovered in time, such an error becomes a serious matter. The error of omitting to punch properly a second-class or a round-trip simplex ticket must also be guarded against. If many coupon tickets are wanted, some time prior to the regular ticket hour should, if possible, be arranged for the execution of them. Otherwise, a delay to the train or a failure to supply all passengers with tickets is likely to result. Either fault is one which it is very desirable to avoid. All tickets spoiled in execution must be marked "void," and so accounted for. Tickets that have been sold but do not get used, may be redeemed, the particular practices of different companies varying considerably in regard to this. Many lines, but not all, *advertise* their willingness to redeem tickets which for *good reasons* have not been used. Some lines redeem unused tickets if claim is made immediately to the agents selling them; if claim is delayed, it must be made to the office of the general passenger agent. Other lines are less strict in the matter. Stop-over privileges, though often desired by travelers, are, generally speaking, not to be granted. However, there are certain points — with the names of which agents are expected to become acquainted — at which stop-overs are allowable. A line which permits stop-overs has an evident advantage in its attractive power as compared with one that has not, other things being equal.

In the closest relation to the sale of tickets is the daily balance already referred to, to be made at the close of sales. This is very necessary to the keeping of an accu-

rate tally of the cash taken in for tickets, and should not be neglected. Tickets should be arranged, first, according to form numbers, and then, subordinately, according to destinations alphabetically listed. The rate for each destination and the number of tickets for each should be shown, and the product of the two placed in a column of total charges. The footing of the column shows the amount of money collected during the sale. If a shortage in cash is discovered, steps may and should at once be taken to make collection by wire, if possible. Any overage may be held until claimed by the proper person, making good his claim. This daily balance, though not to be considered as a necessary part of the station records, is very helpful for its particular purpose, and also is a convenient auxiliary, sometimes, in the checking of the regular reports.

Baggage is usually considered as the wearing apparel and personal effects of a passenger necessary for his comfort or convenience on his journey or in immediate relation thereto; such as trunks, boxes, miners' packs, satchels, valises, toolchests, saddles in sacks, guns in cases, theatrical paraphernalia. It does not ordinarily include jewelry, goods of extraordinary value, perishable articles, musical instruments, sewing machines, furniture, wagons and carts, groceries, provisions, animals, game, merchandise, explosives, liquids, gambling devices, property liable to suffer damage from ordinary handling. The question as to what constitutes baggage is one that should be well settled in the minds of agents and their baggage-masters; there is no other question that arises so often or gives so much occasion for dispute with rail-

way company patrons. The liberty allowed (on American railways) to passengers in regard to baggage, although rather large, seems not to give universal satisfaction, the baggage-master is so often called upon by passengers to extend it. This cannot well be done, and the baggage-men are compelled to exercise care and firmness in their characteristic work, — checking baggage. A baggage check ordinarily consists of two parts, a “strap check,” fastened to the baggage itself, and a duplicate check delivered to the passenger on the presentation of a ticket to be punched with the “B” punch. The two checks bear the same number and the same notations as to the origin and the destination (or perhaps only the latter) of the baggage. The duplicate, as every one is aware, constitutes, when presented, a demand for the baggage. Baggage checks are local or foreign. Foreign checks must show routing. An ordinary check calls for the free transportation of one hundred and fifty pounds (or in some states of the Union, two hundred pounds) from the point of origin to the destination of the baggage. If the weight of baggage exceeds the ordinary limit, transportation is not entirely free, but is charged for in proportion to the amount of the excess, according to a tariff based upon the tariff for tickets. To cover excess baggage a check of a particular form is used. It consists of three parts instead of two; viz., a strap check, a duplicate, and a third part bearing a full record of the baggage, including total weight, excess weight and charges collected, besides destination, kind of collection made, whether cash or mileage coupons. This portion, called the “auditor’s advice slip,” is used

as a basis of excess baggage reports and is forwarded to the auditor (ticket auditor) at the end of the month, together with the baggage reports. The three parts of the total check bear the same number. Excess baggage of a special sort is constituted by corpses. The charge made for the transportation of corpses is the same as the cost of a first-class ticket. And, in fact, a ticket for the corpse is purchased by the passenger in charge of the corpse when he purchases a ticket for himself; but it is at once exchanged for an excess baggage check, the ticket itself being taken up by the baggageman at the time. (The ticket for the corpse is indorsed "Corpse," and the ticket held by the passenger is correspondingly indorsed "Good only if accompanied by corpse.") If it is desired that charges be collected on baggage when it reaches its destination, a "C.O.D." check, so-called, showing the amount to be collected, is attached to the baggage, and the baggage, of course, is redeemed on the payment of the required charges. Baggage remaining at the station beyond twenty-four hours, undelivered, becomes subject to a storage charge, which is shown by means of a special check attached to it at the expiration of the allotted twenty-four hours' free time. Special forms of baggage not checked are dogs and (on a few lines) birds. A charge is collected for their transportation by the train baggageman, who at the same time assumes responsibility for their safe conduct to destination. The rules and requirements above given do not apply to baggage carried on freight trains, which, as we have seen, is handled by means of a freight-train baggage waybill.

In the actual handling of baggage the following rules

are those usually laid down to be observed: First, strict regard must be had as to what is and what is not baggage, according to what has already been stated on the subject. This is all the more necessary because of the pressure that is frequently brought to bear toward the violation of rules laid down. Again, it is necessary to insist upon the maximum limit as regards the weight and the size of baggage (no single piece should weigh over two hundred and fifty pounds or be more than four feet "square") and upon the payment of excess charges when they are in order. Thirdly, baggage must, as a rule, not be checked if not actually present to be checked. An exception to this rule is made in favor of baggage covered by checks, held by passengers, of foreign lines or of transfer companies in whose possession baggage not yet transferred still remains. The reason for the main rule in this instance is obvious: the railway company cannot consistently assume responsibility for that over which it has no control. Fourthly, baggage should, as we have already stated, be checked only on presentation by its owner of a ticket showing the destination of baggage and constituting a warrant for checking it; and the ticket should be punched with the "B" punch. Fifth, baggage should not be accepted and checked if in serious bad order or if not properly locked or secured against opening. Sixth, generally speaking, baggage should, if possible, be forwarded at the time checked; if this cannot be done, it must follow on the "next train." Seventh, baggage that is short from a connecting line must be watched for. Eighth, it must be promptly forwarded on arrival. (This is a matter requiring much

care.) Ninth, baggage should not be checked beyond destination, nor short of it. Tenth, care must be exercised not to load articles which have not been checked as baggage. Eleventh, baggage forwarded must be recorded and entered on a waybill to be given to the train baggageman. Twelfth, baggage received must be compared with the waybill on which it is received, discrepancies, if any, being noted. Thirteenth, a record must be kept of baggage received. Fourteenth, baggage apparently having excess weight should be weighed and proper excess charge made on it. Fifteenth, baggage received must, as a rule, not be delivered except on presentation of the proper duplicate check. If the duplicate check has been lost or checks have been mismatched, passengers must be required fully to identify their baggage and pay (fifty cents) for lost check. Sixteenth, storage must be collected according to rule already explained (Sundays and holidays not being included in delayed time). Seventeenth, bonded baggage may be delivered only in the presence of a United States customs officer. Eighteenth, received baggage which is short must be promptly traced, preferably by wire. Nineteenth, baggage remaining undelivered should be reported promptly and frequently as on hand. Twentieth, all tracers regarding baggage should be fully and promptly responded to. Twenty-first, of the condition of baggage in bad order proper record should be made. Twenty-second, baggage should be loaded and unloaded with proper care (see above, p. 133). Twenty-third, registered railway mail must receive the same attention and care that are given to baggage.

Certain miscellaneous matters falling within the province of the passenger department of railway service remain to be mentioned. If a ticket is furnished a passenger on order, a receipt for the ticket must be obtained from the passenger to whom it is furnished. If a passenger requests a receipt for fare paid by him, it should be given. The proceeds of the "gum machine" are reported on the excess baggage sheet, so also those of the weighing machine. Cream shipments are carried in baggage cars, being covered by waybills or by special tickets ("milk tickets"). Traveler's accident insurance is sold at most stations: it is variously accounted for according to the practices of different lines. Ordinary passenger tickets are sometimes ordered at a distance by telegraph, a prepaid order to cover being mailed to the office at which the ticket is furnished. On some lines there are in use tickets called "fare tickets" (\$10, \$20, \$50 in amount), which are accepted for not only ordinary fares, but also for excess baggage and storage, ticket detachments, parcel-room charges, meals and accommodations at company dining rooms and hotels.

The essential and permanent record of tickets issued is the ticket register, so-called. It consists of a book the pages of which are so lined, horizontally and vertically, as to contain, at the side, spaces for the ticket form numbers arranged in order vertically, while horizontally on the page are shown, for each day of the month, the closing numbers of tickets issued, the number of tickets sold (or the difference between the closing number of one day and that of the next on which tickets are sold), and the amount of proceeds for each day. There is a space for

the weekly total of each form issued, and at the end of the month there are four spaces for the totals of the four weeks and a space for the grand total of each form for the month. The total of all forms for each day is found at the bottom of the page, and the grand total of each page footed vertically must, of course, be identical with the sum of the horizontal totals. In posting the record the tickets are sorted, and arranged, first in the order of their form numbers, and then under each form in the order of the individual numbers of the tickets. Each form is then posted by itself in its proper order. The totals at the bottom of the page for local tickets, for coupon tickets and for baggage, are shown separately, and a separate line may be reserved for special items. If the number of tickets sold daily is large, the book should be carefully posted each day, while all circumstances of the sales are fresh in mind. In any case it will require to be posted at least once a week in order to obtain data for the weekly ticket report. To avoid the disagreeable necessity of hunting for errors inadvertently committed it is best to post the register carefully along during the month and to have it all ready to square with itself and with the tickets issued, at the close of the month's business. In the posting of the tickets each one must be closely scrutinized to detect errors of omission or commission — as a date omitted, rate wrong, destination omitted or not clearly shown, tickets sold out of order, etc. If tickets have been sold out of numerical order the fact must be noted; if a ticket has been spoiled and marked "void," it must be so reported. From the ticket register daily kept up is obtained the item of the

amount of the proceeds which is required for the making of daily remittances and for insertion in the daily cash account. (This item, however, may be obtained from the daily balance, already spoken of, made at the close of the sales of tickets.) The ticket register, properly kept up, will be found to agree with the monthly reports made to the auditor, which have to be discussed hereafter. Ordinarily it is not necessary to enter, in the ticket register, the details of the coupon ticket business, though the totals may well be shown therein. Those details are shown fully in the monthly abstract of tickets issued. However, such a register may be kept if thought necessary. In case a ticket is missing and must be traced, the copies of the invoices of tickets received and tickets returned and the reports made monthly to the ticket auditor are used as sources of information as to the disposition that may have been made of it, provided it has not been stolen. To prevent the stealing of tickets, they must be kept locked up; to prevent their being lost or unwittingly issued, they must be handled with the greatest care and attention. The daily posting of ticket records is recommended as a check upon all errors or inequalities in handling tickets.

To the general passenger and ticket agent is made at the end of each month a report of earnings. The report is comparative, showing the number of tickets sold and the revenues for two successive years for each class of ticket sold and the increase or decrease, as the case may be, in sales. Local sales and interline sales are shown separately. Under the heading of local tickets are shown separately the sales of single-trip, round-trip,

mileage, other forms, storage, miscellaneous items; under the heading of interline, or coupon tickets, are shown separately the sales of regular tickets, one-way and round-trip, and of the extraordinary, as colonist, tourist and excursion tickets. Proper explanations of increase or decrease in business are added.

CHAPTER XXII

MONTHLY BUSINESS AND EXPENSE REPORT

Comparative Report, Items Included — Tonnage and Earnings Statements for Freight, Earning Statement for Passenger Business, General Tonnage Statement, Carload Commodity Statement, Payroll, Explanation.

FROM the station's records of its traffic operations, chiefly, is compiled each month a report showing in summary form the amount of business done and expense incurred during the month. This report necessarily includes both forms of traffic, freight and passenger. It covers the following items: (1) a combined tonnage and revenue statement for freight and a revenue statement for passenger business; (2) statement of the total tonnage handled, regardless of revenue; (3) statement of carloads forwarded and received, showing kinds of commodities; (4) copy of station payroll; (5) statement of amounts paid out for handling of freight; (6) statement of causes of increase or decrease in business. The statement is throughout comparative, the respective amounts for two consecutive years being exhibited in juxtaposition. The freight tonnage and revenue statement includes the following items: (1) freight forwarded to local points, tonnage and revenue, "this year" and "last"; (2) freight forwarded to points on other roads of the system, etc.; (3) freight forwarded to other than system roads, etc.; (4) freight received from local points, tonnage and revenue,

"this year" and "last"; (5) freight received from points on other system roads, etc.; (6) freight received from points on other than system roads, etc.; (7) miscellaneous freight receipts, — switching, demurrage, storage, etc.; (8) the total of freight business. The statement of passenger business includes the following items: (1) proceeds of local ticket sales, (2) proceeds of coupon ticket sales, (3) miscellaneous proceeds, (4) the total of passenger business. The two totals, freight and passenger, are combined to form the grand total of the station's business, and the difference of the grand totals for the successive years is clearly exhibited as increase or decrease as the case may be. The general tonnage statement distinguishes c. l. and l. c. l. tonnage, also tonnage handled on "local" billing from tonnage handled on "through" billing. The statement of c. l. commodities shows in considerable detail the various classes of commodities forwarded and received, taken separately. By carrying totals forward from month to month there is made to appear each month the total of business done so far during the year. The difference of the years may be readily ascertained for each month as well as for the portion of the year that has already elapsed at the end of a given month. Expenses for the years are shown in a corresponding manner. This report is of interest and value to other departments besides the traffic, and several copies are made of it to be forwarded according to the instructions received from those desiring it. To make it of the highest value, the statement of causes of increase or decrease of business should be as nearly complete as possible. To this end

the agent, whose proper duty it should be to compile the report, should make a careful analysis of each month's business in the light of all the knowledge which he may possess as to the conditions of business in general as well as of the particular business of the station. The task is not an easy one, nor can it generally be performed in an entirely satisfactory manner. The report should have quite as much interest and value for the agent himself as for any one else. The analysis of the report naturally discloses the weak as well as the strong features in the station's business and should, perhaps, afford some suggestions as to things necessary to be done or to be aimed at in order to improve existing conditions. Doubtless it is by this report that the management of the station will largely be judged, as to its efficiency and its profitableness for the company.

CHAPTER XXIII

THE STATION AND THE TREASURY DEPARTMENT

Supreme Importance of the Relation — Collections, Passenger, Freight, No-credit, Reason Therefor, Necessary Relaxation of Rule, Person Responsible for Making Collections — Record of Bills Collected, Cashbook, Analysis of it, Rule Governing Items placed on Cashbook, Corrections, Self-explanatory Character of Cashbook, Drafts as Equivalent to Cash — Disbursements, Bills Due Other Companies, Pay Checks, Vouchers — Remittances to Treasurer, Dictated by Cash Balance, Errors in Making Up Remittances, Promptness in Forwarding them.

THE officials of the treasury department are the treasurer and perhaps a general cashier. The relation which the station sustains to the treasury department is one rendered necessary by the disposition which must be made of the revenues accruing from the station's traffic operations. Of the supreme importance of this relation it is unnecessary to speak at length. In no other single point, perhaps, must the interest of the company be so carefully protected as in this. We shall consider the matter under the following-named heads of discussion: the collection and safe keeping of revenues, cash balances and remittances, and disbursements.

What has to be said regarding collections applies chiefly to freight revenue collections, passenger revenue collections being invariably made at the moment of purchase of transportation and without any special labor or procedure, without even a receipt being given or taken. (The passenger, however, may obtain a receipt

if he finds it necessary to have one.) Freight collections are matters of some formality and must be given very particular attention in every regard. We may here repeat what has already been stated, that, theoretically, no freight may be delivered except upon immediate payment of all accompanying charges; there is, generally speaking, no credit relation possible between a railway company and its patrons. To agents is granted no authority to allow credit, unless such authority be expressly obtained from the company's treasurer or from the audit office under the approval of the treasurer. And it may not be out of place to consider briefly the reason of this; all the more so that many persons have some difficulty in understanding the matter. A railway, in order to perform its functions as a reliable servant of the public welfare, cannot consistently, any more than a bank, do business on a basis of such uncertainty as would be one of indiscriminate credit allowances. To deserve and have the confidence of the public it must needs keep itself on the most solid financial basis; and being a permanent establishment, it may always be easily located — which cannot be said of its transient customers — when any demand is made upon it. For these reasons the relation between a railway and its patrons is not the same as that between one merely private individual and another, or between an individual and a private corporation: the credit relation is less applicable in the one case than in the other. However, circumstances may make it convenient and desirable for the railway company to allow a limited credit. The matter of making collections is one involving much

labor, care and attention. Anything that may safely be done to lessen these is an advantage to a company as well as a favor, perhaps, to its patrons. A *few* collections made during the month may serve the same purpose as frequent collections and will be much more convenient. The rule regarding credit is also apt to be relaxed somewhat at competitive points on account of inequalities between different lines in their dealings with the public. No company, if it can possibly help it, is entirely willing to see itself outdone by another in any regard. If one company sees fit to allow credit in a limited degree to patrons of it, another company can, consistently, hardly refuse to do the same. But—not to dwell longer on this point—as a rule, freight charges are collected on delivery of the goods, or just as soon as possible thereafter. From entire strangers freight is collected at once; from regular and reliable shippers it is collected within, say, twenty-four hours after delivery of goods. If customers fail to pay promptly, they must thereafter be refused their freight unless charges are paid prior to the delivery of freight. Responsibility for the collection of charges rests immediately with the cashier, who is required to know thoroughly, and to enforce, the general rules of the company or the special instructions of the treasurer regarding collections. Neither the cashier, nor even the agent, may depart from those rules and instructions except at their own personal risks. As the cashier makes the collections, so he has special charge of the funds collected and has entire control of the station safe by which the funds are protected. The “combination” of the safe is unknown to even the agent,

who has what is mostly a supervisory authority as regards cash matters purely as such. In the station safe are kept, besides cash, drafts and valuable papers, and records, such as the cashbook and ticket registers, etc.

When collected, bills, of whatever nature, must be immediately entered as collected in the station cash account or cashbook. Any laxity or neglect in this regard is intolerable, begetting much trouble and annoyance, to say the least. Cash paid out must likewise be promptly and accurately registered. The cash account consists of two main portions, known as the debit and the credit sides of the account, these two sides being, ideally, in perpetual balance. On the debit side the following items are accounted for in distinct columns: (1) proceeds of freight received, including "freight" charges proper and "advance" charges of waybills and everything of analogous character; (2) charges prepaid on freight forwarded; (3) miscellaneous (freight transportation) charges; (4) proceeds of passenger business, including, in (preferably) separate columns, (a) ticket sales, (b) baggage and miscellaneous (passenger) charges; (5) special items; (6) total; also spaces, at the left hand for specifications as to the source of the charges, name of person from whom due, and other items necessary for the understanding of the circumstances connected with the charges made. The credit side of the cashbook comprises the following items in separate columns: (1) "advance" charges paid to connecting lines on freight forwarded; (2) charges paid to other lines to whom freight is delivered with charges to be prepaid wholly or in part; also refunds to shippers or others of

overcharges in freight collected or of other sums; (3) miscellaneous credits; (4) remittances to the treasurer, (a) freight, (b) passenger in separate spaces; (5) totals, also spaces at the left hand for identification of items. In entering items on the account, care must be taken that everything entered have its sufficient reason and be entered in its exact place. The general reason for placing items in the cash account is that they immediately and directly concern *cash* received or paid out; and, as a pretty strict rule, none but cash items in this sense of the term must appear in the cash account. It may, however, happen that items that are *not* cash items in the *strict* sense are placed in the cashbook as matters of record merely, there being no other convenient way of disposing of them. (Details on this point must be omitted here.) If errors are committed in making entries, they should be corrected, not by erasures, but by *additional* entries of the proper sort, the reasons of the corrections being made perfectly apparent by proper explanations and references. Obscure entries, unexplained alterations, are apt to give rise to misunderstandings and cause trouble, especially for other persons — the traveling auditors in particular — than the person who makes them. The cash accounts, in a word, should be such as to be fully self-explanatory. The footings of the various columns of the cashbook are carried forward from day to day, forming cumulative totals, so that the final total is the total for the month. To avoid misunderstanding it is proper to explain that by cash is meant here not merely literal cash, but anything used, for convenience' sake, as the equivalent of it. Such are

the drafts authorized by a railway company for use in the payment of bills due other lines, each station of importance being provided with blank drafts to be filled up, signed by the agent, and used as required from time to time. The drafts as issued must be charged on the debit side of the cash account, the cash itself, which would otherwise have to be paid out, being retained as a credit to offset it. Besides drafts, vouchers, or receipted bills against the company, may be used as the equivalent of cash, in making remittances. The book of blank drafts, we must not omit to mention, must be carefully protected by being kept in the station safe. At the end of the month a list of drafts used has to be forwarded to the audit office to be checked against the station's accounts.

Cash, or its equivalent, is paid out for various purposes, chief of which are the following: (1) the settlement of bills due other lines on freight received from them with charges collectible or on freight delivered to them with charges prepaid; (2) the cashing of pay checks or time checks of employees of the company; (3) the cashing of claims or making of refunds to shippers. In making payments to other lines the company's draft is, or may be, used; other payments are generally made with cash. In making disbursements it is essential that a formal receipt be obtained for every item. Pay checks must be indorsed strictly according to the names shown on their faces. Time checks or time tickets must be twice indorsed and must be witnessed, an identification ticket also being required. Pay checks may, when properly receipted, be used as cash in making remittances;



part of the station records, as it is needed in the checking of the station accounts by traveling inspectors of accounts. Two different forms of remittance slips (lists) are in use,—one for general or ordinary remittances and another for special remittances. General remittances are remittances of the proceeds of ordinary traffic; special remittances represent incidental proceeds, such as those derived from the sale of goods on hand, or from claim collections, etc. The two sorts must be differently and separately handled, the different remittances being shown in different columns of the cashbook. Remittances must be forwarded to the treasurer daily. They are delivered directly to the express messenger running into the station and are receipted for by him. Care must be exercised to see that remittances are actually made up and forwarded when due. If this is not done trouble is apt to arise, it being the fixed intent of railway companies to keep their cash moving away from stations (instead of lodging there) to the central places of deposit and security. In case of serious delay to remittances it is the practice of the treasurer or his cashier to wire to the agent at fault an inquiry as to the reason for delay.

CHAPTER XXIV

THE STATION AND THE ACCOUNTING DEPARTMENT

Accounting Department in Relation to Others — Interdependence of all Departments — Officials of the Accounting Department — Documents Forming Basis of Station Balances: Abstracts of Local Waybills Forwarded and Received; of Interline Waybills, Forwarded and Received; of Miscellaneous Charges; of Items On Hand Uncollected; of On-hand Amounts Due Other Companies, Special Items, Drafts issued; of Tickets, Local and Coupon; of Baggage, Miscellaneous, Special, Passenger; Remittances, etc., Explanations — Location of Errors — General Balance Sheet, Analysis, Importance of a Familiarity with It — Vigilance in Keeping Accounts Straight — Item, Balance Due but Retained — Miscellaneous Matters Included in the Relation of Station to Accounting Department.

IN considering the relations of the station to the accounting department it is well to bear distinctly in mind the fact that the railway company, with all its departments of organization, is still a single entity or totality. It should need no extended argument to prove the interdependence of the parts of the system. The kind and amount of operative service furnished closely depends upon the kind and amount of traffic, and *vice versa*; and naturally the accounting function is closely related to both the others, rather in the relation of effect, perhaps, than of cause. The relation of the accounting department to the treasury is naturally most intimate. The accounting department is concerned chiefly with the company's records and reports; but the balances arrived at by it necessarily react upon the activities of other



departments. Of the records and reports made, those relating most directly to the balances in the company's affairs are of prime importance to the accounting departments; but other records and reports may come under or within its purview, for, by its very function, it must arrive at at least a general view of the company's activity as a whole. In our discussion of the station in relation to the accounting department we shall deal chiefly with the station balances and the accounts leading up thereto; but we shall also have to discuss agents' relief claims, as well as a number of minor matters. The officials of the accounting department, it must here be noted, are: the general auditor, or one of the vice-presidents, the auditor of disbursements, the auditor of freight receipts, the ticket auditor and the traveling auditors. It is chiefly with the freight, the ticket and the traveling auditors that the station is concerned.

Now, the documents leading up to, or providing the proper data or basis for, the final balances are necessarily reproductions of the station's original and primary records, summarized or abridged by the omission of items of merely incidental importance; they are known as abstracts. These include the following: abstracts of local waybills (freight) received and forwarded, of interline waybills received and forwarded, of miscellaneous freight transportation charges collected, of items on hand uncollected, of the drafts issued, of on-hand amounts due other companies, of special freight items; abstracts of local ticket sales, of interline tickets, of baggage collections, of special miscellaneous items of remittances. Beginning with the freight abstracts,—these may be

described as summaries of the skeletons, as it were, of the waybills received and forwarded, showing, as a rule, the totals (for each waybill) of weights and charges, together with other items, as number and date of waybills needed for the proper identification of the shipment covered. In the abstracts of waybills forwarded, bills are taken in the order of their numbers; in the abstracts of waybills received, waybills are taken in alphabetical order of names of stations. On some lines abstracts are of a more concrete character, providing data for a general statistical accounting of the company's affairs. In such cases abstracts may show the names of consignee, consignor, points of origination and destination of shipments. Abstracts are footed, and complete totals are obtained. They are made either daily, weekly or monthly, according to different methods of accounting offices, or even merely according to the amount of business done. If abstracts are rendered daily or weekly, only a mere summary or recapitulation of them is necessary at the end of the month; or, by some accounting offices, perhaps not even that may be demanded. As has been indicated, separate abstracts are required for local and for interline business; this for the obviously necessary purpose of distinguishing properly purely local tonnage and earnings from those which are joint. On account of Interstate Commerce Commission requirements it is also necessary to distinguish *inter*-state business from *intra*-state; and this is done by making a separate abstract of interstate business. Copies of abstracts, and of their summaries, are retained at the station as a part of its permanent

records, the original abstracts being forwarded to the general accounting office. The copies are used by the traveling auditors in inspecting and checking the station accounts; and they may be used in other ways. It is of course essential that abstracts should be accurately compiled and that the copies should be in all respects correct. In abstracting the items of miscellaneous freight transportation charges, there are noted, besides the amounts themselves, other data, such as waybill numbers and dates, the numbers of receipts issued for charges paid. Any uncollected items must be transferred to the general list of uncollected items on hand. The abstract or summary of on-hand or uncollected charges is obtained directly from the body of uncollected bills which may have accumulated during the week or the month. Properly to identify the uncollected amounts, the numbers of the freight bills and of the waybills bearing the uncollected items must be given, also the names of the station making the bill and of the consignee. Reasons must be given for noncollection, it being assumed that every proper effort has been made to make collection. This "on-hand" list must be distinguished from that, already mentioned, made to the claim department, of *goods* on hand unclaimed and refused. It may happen, though this is not always, or perhaps generally, the case, that at the time the balance, daily, weekly or monthly, is struck, there are certain unpaid amounts due to connecting lines or to consignees. These require a distinct abstract or summary. (Amounts due *from* connecting lines may be entered in the general list of uncollected items.) Waybill corrections which have been made at

the station after waybills have been reported, or which have been made in the audit office and forwarded to the station for insertion in the station accounts, must be summarized, either to be inserted in the balance sheet or else to be added to or deducted from the abstracts of waybills, according to extant instructions of the audit office. (They must, as a matter of course, show and have effect in the cashbook.) Certain very special items sometimes accrue, which are not easily classified and are learned rather from their actual occurrence than otherwise, find a place in the general balance. The list of drafts issued is compiled directly from the book of drafts. The final item to be mentioned in relation to freight matters is that of the amount on hand, either debit or credit, when the previous balance was made and reported. Freight abstracts are forwarded to the freight auditor.

The monthly passenger abstracts are the local ticket abstract, the abstract of coupon tickets, and the abstract of excess baggage and miscellaneous items. The local tickets which have been sold during the month must be sorted according to their kinds, their form numbers and the names, alphabetically arranged, of their destinations. There must be shown in the abstract, for each destination, the number of tickets sold, the rate at which sold, the amount of the proceeds and the individual numbers of the tickets, "void" tickets being designated as such. The tickets of one and the same form number compose one group, the total proceeds of which must be shown and must agree with the total amount for the group shown in the ticket register.

All the groups are similarly gone through with. Then must be shown the opening and the closing numbers of the tickets sold in the various forms, the number of tickets, the proceeds of each form being thereby ascertained. These results must, naturally, tally precisely with those arrived at by the former handling. The coupon tickets have to be sorted with reference to the form numbers, to destinations and individual numbers. The abstract will show the destinations of tickets, all form numbers, opening and closing numbers of tickets sold, the rate for each destination, and the grand totals of all tickets, this last item agreeing with the corresponding one of the ticket register. The excess baggage and miscellaneous items have to be similarly handled. Now if a discrepancy be discovered between any of the abstracts and the ticket register, it must be located and correction made in the register or in the abstracts, or, it may be, in both. Presumably, however, the ticket register should be correct. In locating discrepancies the daily ticket balance above described (p. 230) may be found serviceable. If the error is located in ticket register, alteration must be made to correspond in the ticket remittances for the month; otherwise the item of ticket remittances for the month will be incorrect and no true balance will be arrived at. Passenger abstracts are forwarded to the ticket auditor. The summary of actual remittances to the treasurer is naturally taken from the receipts obtained from the messenger to whom all remittances have been delivered for forwarding. The total thus obtained should agree with the total of remittances derived from the cashbook. Credit is

allowed to the station by the treasurer for only such amounts as have been forwarded to him. If not all remittances due are really forwarded, the station will be checked short. Any discrepancy as between the cashbook and the messenger's receipt book must be located and proper correction made. As to the amount that *should* be remitted, the cashbook is, of course, presumably correct. If the list of actual remittances shows a shortage as compared with the cashbook, an additional remittance will be required to secure a balance; if the opposite is the case, i.e., if there is an overage, the final remittance must, if possible, be cut down sufficiently to secure the required balance. If the cashbook is correct throughout, the final remittance will be different from that shown in the cashbook, but the discrepancy will be unavoidable; it will be justified by the fact that it offsets a former discrepancy inadvertently overlooked.

We may now attempt to construct the general balance sheet of the station, which is founded on the documents above discussed. Local business and interline business must be shown separately, and also passenger business and freight business likewise, though all appear on the same sheet. On the *debit side* of the sheet appear the following items:

1. Amount due company but retained last statement, (a) freight;
(b) passenger.
2. Amount of "freight" charges collected on local waybills received.
3. Amount of "advance" charges collected on local waybills received.
4. Amount "prepaid" charges on local waybills forwarded.
5. Amount of "freight" charges collected on "foreign" waybills received.

6. Amount of "advance" charges collected on foreign waybills received.
7. Amount of "prepaid" charges on foreign waybills forwarded.
8. Miscellaneous freight transportation charges collected.
9. Supplementary corrections added, (a) to local waybills; (b) to foreign waybills. [These items are omitted if they have been entered in abstracts.]
10. Amount of drafts issued.
11. Amount due others but not paid out.
12. Special items on freight account.
13. Passenger receipts: (a) Local tickets.
(b) Coupon tickets.
(c) Baggage and miscellaneous.
14. Special items in passenger account.

On the *credit side* of the balance sheet we have:

1. Balance due station last statement.
2. Amount prepaid charges on local waybills received.
3. Amount advance charges on local waybills forwarded.
4. Amount prepaid charges on foreign waybills received.
5. Amount advance charges on foreign waybills forwarded.
6. Supplementary corrections to be deducted from (a) local waybills; (b) from foreign waybills. [These items omitted if corrections have been entered in abstracts.]
7. Total remittances: (a) freight; (b) passenger; (c) special.
9. Amount of charges on hand uncollected.
10. Special items.

Nothing must be entered on the balance sheet without its sufficient reason. "Special" items are items of somewhat irregular or unusual nature; they must not on that account be such as are not necessary in themselves but merely for the sake of the balance. Of the balance sheet it should be remarked that a thorough knowledge of it is essential to a proper handling of the station accounts. To avoid errors it is of great importance to consider how each matter handled would appear on the

balance sheet and what would be its effect there. Especially is it necessary to understand what things should be *debited* to the station and what things *credited* and why — and to this end a familiarity with the balance sheet is of great assistance and value. In a very true sense, with the knowledge of the balance sheet the real knowledge of station accounts both begins and ends. The general balance sheet is evidently compounded of the summaries of the freight and the passenger accounts, together, perhaps, with some miscellaneous items of a general nature. If the freight and passenger balance sheets are made up and rendered separately, as is done on some lines, there is no necessity of the general balance sheet being rendered at the station.

In immediate connection with the matter of station accounts should be mentioned the periodical visits of inspection made to the station by the traveling auditors, and the desirability of keeping all accounts, at all times (as nearly as may be), in a proper condition to undergo inspection creditably. This is worth while, not merely as matter of pride or of ambition, but as a matter of mental satisfaction in other regards. Incompleteness and error in accounts are sources of extra and more or less futile labor, as well as of annoyance and worry. Accounts well kept up are, on the contrary, sources of real satisfaction, even though costing a somewhat strict and laborious application. Generally speaking the matters which are the most frequent sources of trouble are matters of occasional or incidental occurrence, easily overlooked or forgotten. Such matters require an attention out of proportion to their importance in them-

selves; but on account of their relation to the general balance they cannot well be lost sight of. Practically they have to be kept more or less under the personal supervision of the agent himself in order to get properly handled. Such matters are miscellaneous freight transportation charges, small refunds to shippers, infrequent transfers to connecting lines, the correction of one record or set of records to correspond with another, etc. Good accounting depends very much upon correct attention to such incidentals. Errors, it is true, will, in spite of care and attention, occasionally slip into the station accounts, but they will not remain uncorrected. Any discrepancies that may appear at one point will be found explained at another; and the agent or his accountant will always stand ready to make all necessary explanations of things that may arise to be explained.

On the general balance sheet is a single item which, relatively speaking, is continuous from month to month, and which, if nothing to prevent is done, has a tendency to increase and, as it were, to defeat the aim of accounting in general. This is the item of bills on hand uncollected, i.e., not really and fully accounted for as are all other bills. From time to time these items disappear, on-hand goods being delivered and charges thereon collected and accounted for after long delays. Nevertheless many items remain uncollected and uncollectible — mostly having reference to goods short and never received or to overcharges. Such items have to be, eventually, cleared from the station's accounts. This must be accomplished by means of a claim for relief made by the agent upon the audit office. Such relief finally is re-

ceived in the form of a credit voucher. Claims of this sort, it may be observed, are merely *formal* though necessary; they have reference merely to the station accounts as such, and not to the satisfaction of any outside demand made by a shipper. Claims of the latter sort should be made to the claim agent for final adjustment.

There remain to be spoken of certain miscellaneous matters included under the relation of the station to the accounting department. Of these we mention, first, that of rendering a report of "shipper's order" shipments received and delivered, the object of the report being to furnish explicit information as to the surrender or non-surrender of bills of lading covering such shipments. Sufficiently full waybill references to identify shipments must be given; also satisfactory explanation of the non-surrender of any bills of lading on the delivery of shipments covered by them. The report is rendered monthly, and should be signed by the agent personally. Secondly, bills of lading for government freight require to be reported, such bills being accepted in lieu of cash for charges on freight for the United States government. Thirdly, reports must be rendered of shipments of grain milled in transit, that a check may be kept of tonnage of out-shipments as compared with that of in-shipments, so that no shipments not entitled to the milling-in-transit rate ("balance of through rate") from the milling point may be allowed in error. To the auditor, fourthly, must be forwarded at the beginning of the year bonds of indemnity furnished by shippers who may desire to have shipments diverted en route without the inconvenience

of furnishing releases for each and every shipment diverted. And, finally, to mention no other matters, to the auditor must be forwarded applications of new employees for bonds guaranteeing satisfactory service while in the company's employ, such bonds being furnished by a recognized security company, the employee paying the premiums.

CHAPTER XXV

STATION AND CLAIM DEPARTMENT

Claim Department Ordinarily a Branch of the Accounting, Reasons for Distinction — Officials of Claim Department — Nature and Necessity of Claims, Prompt Settlement — Classes of Claims — Form Used in Presenting Claims, Analysis — Proper Preparation of Claims — Forwarding Claims to Proper Official — Prompt Handling of Claims — Prevention of Claims — Tracers as Auxiliaries to Claims.

It would appear that in the majority of instances railway companies make their claim departments branches of the accounting department. The adjustment of claims doubtless involves a close relation to the accounting function, being often a readjustment of accounts or a placing of them upon a new footing. But it also appears that a close relation to traffic and operating departments is involved. The question whether a claim is valid or not in a given instance necessarily presupposes for its solution the determination of the causes, lying in the nature of the services rendered or not rendered by operative or traffic departments, giving rise to the claim. Adjustment by claim is something which may supervene, as a final adjustment, upon an ordinary (unsatisfactory) adjustment, and presupposes all that is involved in such ordinary adjustment. In a sense, then, it would appear that the adjustment of claims in general is matter for a distinct department of railway organization. As distinguished from the mere accounting function the claim-

adjusting power appears to have a more practically directed activity, it often being engaged in the positive control and direction of operative activities, and it as often virtually controls charges independently of rules laid down by the traffic department and enforced by the auditing department. For example, upon the authority of the general claim agent it may depend whether a shipment shall be delivered to a consignee or be held for instructions, whether charges shall (virtually) be waived or collected strictly according to rule. In short, the matter of claims is one of those matters which are subject to practical exigency rather than mere preëstablished rule. From these considerations we are led to treat the department of general claim adjustment (excluding agent's relief claims) as a distinct department of railway organization, somewhat, though not entirely, in contravention, it is true, of prevalent practice. Along with claims we shall include tracers as a constant and an indispensable auxiliary. The officials of the claim department are the general claim agent, with perhaps as assistants a freight claim agent, a live-stock claim agent and a special claim agent.

For definiteness' sake we may describe a claim as a formal demand for recompense on account of some loss or injury to person or property, due to improper service or to some accident in railway operation. The necessity in general of claims need not be disputed; but the agent may well consider, frequently, whether proposed or threatened claims are really necessary or justifiable. The prevention of claims is sometimes quite possible, it would seem, and when possible, should be made real by

agents. When consignees or other would-be claimants are disposed to be unreasonable in their demands, it devolves upon the agent to discourage them in their purpose to enter claim, by refusing to support their demands; they may thus sometimes be led to see the futility of their wishes and efforts and abandon their intent to make claim. To accomplish a main part of the purpose of entertaining them, viz., that of satisfying a claimant and retaining his patronage by giving him a "square deal," claims once accepted must be handled properly and promptly. Claims must be properly distinguished according to their kinds. We may classify them as follows: claims on account of loss or damage to shipments or overcharges thereon, together with claims of the company against consignees for undercharges; claims on account of loss or damage to live stock; claims on account of damage to property or of personal injury received. These classes of claims have to be somewhat differently handled by the agent. A general form is provided, to be used in the presentation of claims to the department of claims. This form shows the classes of information required in claim adjustment and should be used as a guide in the preparing of claims. Thus, it is necessary to state the name of the claimant and the nature and amount of the claim, to furnish the itemized bill of the claimant, the original bill of lading of shipments and original paid freight bill properly receipted, original invoice of goods, or certified copy thereof, any information of value as to the condition of shipments as shown by over, short, or bad-order reports (or copies of those reports may be given), also any other matters of

information tending to elucidate the claim and validate it. These items would not have the same importance individually in the different classes of claims. The judgment of the agent must be exercised as to that point. Claims, for example, with regard to property not shipped (as an animal killed on the right of way, or a haystack set on fire by a passing engine, or a person injured in an accident) would not call for a bill of lading or a copy of a freight bill or the like. Items really essential must invariably be supplied, as, for example, a paid freight bill, claimant's bill, invoice of goods or certified copy thereof, in case of goods shipped. And it is necessary that shippers be invariably required, in making claims, to furnish the necessary data so far as they are concerned. Without these, claim papers forwarded to the general claim office will be returned for completion. Some educational work among shippers is necessary on the part of the agent in regard to the proper manner of preparing claims, as in regard to other things. In all cases it is necessary that the substantial grounds for claims be made palpably plain, and that claims be not accepted and presented to the claim department unless or until this is done. Especially important is it that the exact amount of the claim be stated, and an opinion be expressed by the agent as to its reasonableness or as to desirable modification of it. Claims when properly prepared must be forwarded to the proper officials, if there be more than one to whom claims are sent: live-stock claims to the live-stock claim agent; freight loss and damage claims and overcharge claims to the freight claim agent; personal injury and property damage claims

to the special claim agent. If claims are missent, delay in their adjustment may ensue, or even loss of claim papers.

After proper preparation and presentation of claims, follows their investigation. To meet the possible demands of correspondence rendered necessary in the course of the investigation, station records as to shipments subject to claim should be made as full and correct as possible; otherwise, delay in settlement and dissatisfaction arising therefrom or from other sources will result. Promptness as well as fulness in answering correspondence is very important for the prevention of delay. All necessary data being promptly furnished, adjustment should occur in from thirty to sixty days. If it does not, the agent may feel justified in pressing for an immediate adjustment, since, if possible, he is bound to identify himself with the interests of the claimant in a reasonable degree. Consistency as well as courtesy demands this. When claims are at last settled, note of the fact should be made in the claim record. This being done, the transactions begun are closed. Claims equitably and promptly adjusted are a source of strength to the influence of the station. Better, however, than this is the avoidance of the necessity of claims. To this end the agent can, perhaps, do not a little. What can be accomplished depends more, however, upon train service than upon station service. If, nevertheless, by his reports to claim agent and to train master he can assist in improving train service, he may in so far aid in reducing the number of claims to be adjusted. As the amount paid out in the adjustment of claims is very large

and is yearly increasing, there is reason to make every possible effort toward the avoidance of claims.

In the investigations rendered necessary by claims many inquiries regarding the movements of goods are involved; these auxiliaries of claim investigation are known as "tracers." Such inquiries, it should be added, are necessary also in the adjustment of shortages and overages. Tracers require a prompt handling, and, to be of any value, must be correct and reliable. To make them so, it is necessary that station records be written up faithfully and from personal knowledge on the part of the men actually handling goods moved. Tracers constructed merely by guesswork are, as compared with those based upon actual and reliable knowledge, mere dross or chaff, and should not be encouraged or even tolerated by the agent. Too much valuable time is consumed by them, not to speak of their inherent worthlessness. While most tracers emanate from freight claim offices, many are from stations themselves. These, it is hardly necessary to say, may deserve, and should receive, a proportionate attention.

CHAPTER XXVI

STATION AND MISCELLANEOUS DEPARTMENTS

Executive, Legal, Industrial, Land and Tax, Purchasing Departments.

THE relations of the station to a number of other departments besides those already mentioned may be discussed briefly. Such are the executive, the legal, the industrial, the land and tax and the purchasing departments.

With the executive department the station would seldom be brought into direct relation. At very rare intervals it might occur that a contract would be received from, say, the president's office requiring to be presented by the agent to outside party for the execution of his signature to it. On this topic we need not dwell.

Occasions bringing the station into direct relation with the legal department are not altogether to be unexpected. Frequently a company is threatened with suits or served with writs of one sort or another, as attachment, replevin, garnishment, or with orders to stop goods in transit, or their delivery to consignees. It appears that in no case where legal action on the company's part is called for does the agent have any independent discretionary and initiatory power. Everything of the kind that comes to his notice must be directly reported to the legal department (consisting of the general attorney and his assistants), as well as, also, at the same time, incidentally

to the division superintendent, and to the general claim agent in certain cases. Beyond doing this, and then accurately following instructions that may be received in return, the agent is called upon to assume little or no responsibility. Nevertheless it is, we may take this occasion to say, rather desirable that the agent should be possessed of some independent legal information in order that he may have real appreciation of the legal situations in which he may be called upon to take part. In fact, the legislation of recent years regarding railways has tended to make agents responsible equally with their employers in a number of matters. The Elkins law may be cited here as an illustration. These facts afford a reason for the agent's giving somewhat more than a merely occasional or casual attention to legal matters. Such attention would doubtless make him a more intelligent and efficient servant of the legal department of his company than he otherwise would be apt to be. Topics upon which he might, very properly, inform himself are such as the following: common carriers, agency, guaranty, stoppage in transit, attachments, replevin, garnishments, summonses, contracts, guaranties, bills of lading, receipts. The forms of which he makes daily use, in the pursuance of the company's instructions, all have their legal basis and bearing, and a knowledge of those forms in their legal aspects would be calculated to add to the agent's capacity in all directions. One or two legal points may be here specified upon which the agent should feel clear. Legally, he is bound to deliver no goods — even to an officer of the law serving a writ of replevin, attachment or the like — until the

natural lien of the company upon the goods for transportation charges or for the protection of its guaranteed responsibility to shippers is satisfied. Again, the agent is, on the other hand, legally bound, as a representative of a common carrier, to accept for transportation all goods offered him in accordance with his company's rules and regulations regarding the acceptance of goods for transportation. Confusion upon these and other matters is sometimes produced in the minds of inexperienced agents by the violent threats of shippers or others. With a little pertinent knowledge and self-possession the agent is proof against such threats.

Once or twice during each year the agent receives a letter of inquiry from the company's industrial commissioner. The agent who really has the interests of his company and his station at heart feels it necessary and proper to answer, as fully as he is able, the inquiries addressed to him. They relate to the conditions of industrial or economic growth or development at his station or its vicinity; to results in the past and prospects for the future. If the agent has been in the habit of keeping in touch with his environment he may find much that is interesting and valuable to report; in his community there may be — not many, perhaps, but at least a *few* — unexploited resources, agricultural, manufacturing, mineral; something to attract new enterprises, and, in return, to furnish new materials for transportation. Instead of throwing the commissioner's annual or semi-annual letter of inquiry into the waste-paper basket or letting it get buried among other papers upon his desk, we may repeat, the loyal agent will with reasonable

promptness answer it to the best of his knowledge and ability. In the course of time he may be able to discern fruits of his effort in the matter.

With the land and tax department the agent occasionally has correspondence regarding sales or leases of company land or regarding amounts on which taxes should be assessed.

To the purchasing agent or his subordinate, the storekeeper, are made monthly (or perhaps bimonthly) requisitions for stationery or for other supplies regularly needed at the station. Separate requisition forms are used for stationery and for the other supplies. The filling out of these forms is, it is true, a small chore, relatively speaking, but one not to be neglected or carelessly performed. It is necessary to show the amount of supplies on hand as well as the amount required. This showing, if correctly made, necessitates the checking over carefully each class of supplies on hand. If this is not done, supplies accumulate unnecessarily, and have to be returned, eventually, to the supply department. The practice of economy in the ordering and use of supplies is a matter to which attention must frequently be directed. On the other hand, there is sometimes danger of crippling the station activities more or less by an under-supply of forms. Again, to the purchasing department (the storekeeper) old records — records six years out of date — are sent for ultimate disposition. These, when the time arrives, i.e., about the first of each year, the agent sorts out, places in boxes and forwards as per special instructions received. At stations where storage room is limited

this is an important duty. Finally, to the purchasing department (storekeeper) are rendered regularly accounts of the fuel received and used for company purposes. At terminal points and at other fuel stations, where engines are supplied with fuel, a methodical system is in effect. The system includes: tickets supplied to engineers, by which requisition is made for fuel as needed; a record of fuel delivered to engines, according to their class of service (passenger, freight or mixed), the names of their engineers, numbers of the engines and amount of fuel issued, and a record of fuel used for other purposes or forwarded to other points; a record of the amount of coal actually on hand at the end of each month, as shown by direct inventory; a balance sheet exhibiting all items in proper relation. Though keeping the fuel records and making the fuel reports, the station force, properly speaking, does not actually handle the fuel itself, this work being assigned to the section force or to the mechanical department in some of its branches. The necessity of as close accuracy as possible in the fuel accounts is obvious, as the item of fuel is one of the large items among railway expenditures. Fuel accounts are almost inevitably out of balance more or less each month on account of various discrepancies hardly to be avoided. Correction sheets are therefore issued by the storekeeper to balance the book accounts. In making up the monthly balance sheet these must be taken into consideration.

CHAPTER XXVII

SPECIAL FEATURES OF SERVICE AT MIXED STATIONS

Transfer, Junction-Point, Joint Stations — Peculiarities of Each — Great Significance of Transfer Points — Added Difficulties at Junction Stations — Complications of Joint Stations.

By mixed stations we shall here understand stations at transfer points, at junction points or common points, and at points where two lines use the same terminal facilities throughout jointly. The last named class we may term *joint stations*. A *transfer station* we shall term any station at which goods or passengers and their baggage have to be changed from one car or train to another without leaving the same road; while the term *junction-point station* will apply to stations at which there is a transfer from one road to another. A joint station is in a sense the combination of the other two kinds. These three classes of stations have peculiarities of operation distinguishing them rather broadly from those not describable as mixed stations. A transfer of any sort in traffic is a matter of much significance on account of the almost inevitable rehandling of freight or passengers, or both, which takes place. Now the rehandling of freight means, in a sense, a double service: double equipment, double operations, a double force of men performing the operations, a more than double care to avoid risk (increasing in geometrical ratio with the number of rehandlings) of loss or damage

to goods, often double records of transactions, double explanations of errors committed in rehandling. If a shipment arrives at destination in bad order or only in part, the transfer point is at once thought of as the most likely point at which to locate the source of the damage or the shortage; and to transfer points tracers, short reports, over-reports, bad-order reports, drift or flow in streams, as it were. At or to the agents of such points are directed inquiries and complaints innumerable, and their efforts must be incessantly applied toward the removal of all possible grounds of complaint. At transfer points passengers and their belongings must, as it were, be twice looked after lest they go astray or be injured. Passengers are, most likely, nervous and confused for fear they should lose their connections; baggage is hurried from one train to another that it may not be delayed, and in the hurry is, not improbably, damaged, a fact which may have to be accounted for by the agent or baggageman in charge. The men who are performing the work of the station lose a considerable portion of the satisfaction that goes along with deliberate action, from the fact that much of their work must be hurriedly done. But all these difficulties seem inseparable from the very fact or notion of transfer in general. At the junction station they are repeated, with additions; for at such stations freight must not merely be rehandled but perhaps rebilled as well, reregistered generally. Accounts must be kept of its reception and delivery to connecting lines and of the charges collected or prepaid thereon. And here, again, tracers, and claims also, are handled in great numbers. If there is a transfer

track between lines, cars must be interchanged, and interchange and switching accounts must be kept. On the waybills for freight received from connecting lines advance charges (almost unknown at the purely local station) have to be billed out and accounted for; waybills received for freight going to connecting lines may bear prepaid charges to be paid beyond. Between the connecting lines there are more or less involved relations, which must be prudently observed lest dispute arise. An error committed on the part of either line is likely to give rise to inquiry or to a claim that must be dealt with by both. At junction points baggage must be transferred. If baggage fails to arrive along with the passenger owning it, a special service of one sort or another is necessary; and this may occur frequently. The convenience and comfort of passengers waiting for connections must be carefully provided for, day or night, or passengers must be properly instructed as to how to provide for themselves in the matter of making their connections or, perhaps, that of securing comfort. At the joint station the aforementioned conditions are complicated with others of perhaps more difficult nature. Here two opposites, so to say, are forced into juxtaposition: a difference, or even a conflict, of conditions, aims and methods of service exists to be constantly dealt with. Two companies using the same tracks and buildings at the same time, it may be, are exposing themselves to conflict if not positively courting it. Conflict, greater or less, is inevitable if two companies at a joint station have different rules as to equipment, so that what passes inspection on one side is rejected on the

other. The same is true if there are different rules as to sealing cars or other matters. And even if no conflict break out between the companies it goes on clandestinely, as it were, in the minds and experience of the joint employees. It necessarily costs effort of a self-contradictory, nonharmonious sort to deal at one and the same time with two distinct sets of accounts. Similarly with regard to still other matters. It may be remarked, in closing, that while transfer and junction-point stations are absolutely unavoidable, joint stations are justifiable only as measures of distinct or considerable economy in operation; in themselves they are rather absurd.¹

¹ This remark is not intended to be applied to union passenger stations.

CHAPTER XXVIII

THE STATION IN RELATION TO ITS ENVIRONMENT

General Conditions Must be Learned and Analyzed by Agent — Duties in Soliciting Patronage — Routing Orders and Notices to Agent at Shipping Points — Coöperation of Traveling Agents — Requesting Services for Patrons and Otherwise Assisting Them — Looking after Competitive Business — Necessity of Studying Business of Other Lines — Reasonable and not Reckless Competition — Special Patrons, the Judicious Cultivation of Their Friendship — Mutual Advantage of Company and Patrons.

UNDER the above heading we shall discuss: (1) general conditions, (2) competitive lines, (3) special patrons of the station. (1) Every station has one, at least, of the reasons for its existence in certain economic conditions characterizing the territory surrounding it. This territory may be mixed in its resources but is likely to be predominantly of one sort rather than another — agricultural, manufacturing, mining, commercial, educational, or even merely social, in a special degree. It is natural and necessary that the railway should adapt itself to the general conditions of its environment; and this to the end not merely of exploiting it, but also of making it a suitable and valuable return for what has been taken from it. The relation of the two should obviously be one of mutual advantage. Now it is incumbent upon the agent, as the representative of the company to the public, to avail himself of all proper means and opportunities of learning fully and correctly the characteristic

conditions enveloping the station; he must analyze them and be able and ready to represent them clearly and cogently to the managing officials of his company. For his reports to the traffic department he will, if in an agricultural vicinity, for example, naturally seek to obtain complete and accurate information regarding crop conditions,—the kinds of crops, the acreage of each, progress in growth, the actual or probable yield, etc. Whatever the nature of the environment, he will industriously cultivate the acquaintance of those best qualified to know and judge of such matters as he must be conversant with; and he will not neglect to have conferences with them at suitable opportunities. He will, as a matter of course, carefully observe and note points of advantage for his company. He will, on the other hand, give to shippers all information requested by them regarding rates, conditions of service, etc., offered by the company, and make known every advantage they would be likely to gain by using the line which he represents. He will have to remember that he is dealing with and in not mere commodities, but also with persons as well—persons in relation to commodities, and needs to be not a mere official tool or stick, but a real personality. This aspect of his duties, something rather different in kind from his strictly official vocation, should have a considerable portion of his time and attention; and if the press of other work becomes such as to interfere seriously with this work, he should ask for an addition to the office force, since it is quite likely that the patronage which otherwise he would lose will more than pay the additional expense that will be incurred. The

agent should be a real part and factor in the life of the community in which he is located, and that too not merely for the advantage of his company but for the good of the community. He is in a sense an educator: often he may enlighten shippers and travelers as to especial points of advantage for them and as to the business of transportation — no slight matter — in general. To give a formal statement of some of the duties of the agent in soliciting and securing patronage, we insert here a number of rules which are in force on some lines: (1) The agent should spend a part of each day or week, according to the amount of patronage to be looked after, in visiting patrons, learning, if possible, their intentions as to buying or selling and shipping, explaining the company's service and other facilities, and soliciting shipments. (2) He should carry with him a supply of blank routing orders, to be handed to shippers to fill out and sign, ordering or requesting that their shipments be forwarded from shipping point via the company's tracks. (3) He should endeavor to secure the longest reasonable haul possible for the company. (4) He should request the division freight agent to determine, if shipper has not determined, what connecting line is best in coöperation with the company in moving the shipments. (5) He should cultivate the acquaintance of traveling salesmen, from whom information may be obtained as to what shipments are likely to move, and who may be able and willing to assist him in the securing of shipments. (6) He should notify agents at commercial centers of prospective visits of merchants to those centers in purchasing goods.

(7) In securing passenger business he must learn of prospective journeys, call upon intending travelers, explaining advantages of his company's service, as well as its rates and privileges, and soliciting patronage.

(8) In cases of considerable importance he will call in the assistance of traveling freight or passenger agents.

(9) He will avoid soliciting patronage whenever or wherever his company cannot make a reasonable claim for it; he will endeavor to rest his case in every instance upon solid merit and not upon mere plausibility of presentation. In immediate connection with the solicitation of freight business is the use of two forms of importance, viz., the "routing order" and the notice to agent, at point of forwarding, of prospective shipments. The routing order is a form already prepared, ready for the insertion of the instructions of the consignee, relative to the routing selected by him as a consequence of the agent's solicitation. On filling in the routing order the consignee signs it and gives it to the agent to be transmitted by him to the agent at shipping point. As the order is addressed to the shipper, the agent at shipping point presents it to him, requesting the favor of the shipper's complying with it. Consignees may frequently manifest a reluctance to giving routing instructions to shippers through the hands of agents, and shippers are as reluctant in complying therewith. But the agent should endeavor to place the whole matter in such a light as to overcome this reluctance, the routing order, if properly understood, being an advantage to the shipper and the consignee as well as to the railway company. Consignee has reasonable grounds, if he gives a routing

order to the agent, to expect that his shipment will be handled in a certain definite manner, and will know to whom to look for the prompt movement of his shipments, or for a reason for delay. If he gives no order, except an informal one, perhaps, to the shipper, he is likely to be somewhat in the dark as to his shipments until they have actually arrived, and to be fruitlessly tracing for them by different lines. While the use of the routing order is not an absolute guaranty in the matter, it is certainly a valuable help often. It is a good plan to leave blank orders with shippers to fill out at their convenience, the agent to call for them at a given time. Now the notice, already mentioned, to the shipping agent accompanies the routing order when it is sent forward. A duplicate of the notice goes to the general freight agent's office, while a triplicate copy remains with agent as office record. On receiving the routing order and notice of shipment, the agent at shipping point should make the proper solicitation to the shipper and report results, on a form provided for the purpose, to the agent at destination. Thus all the data are given for a reasonable knowledge as to the movement of the prospective shipment, and some basis is furnished for tracing in case shipment does not move as expected.

In the matter of cultivating the territory surrounding his station the agent often has, with, or also without asking it, the coöperation of the traveling agents, freight and passenger. These officials the agent introduces to the company's patrons; with them he confers, and together they join in the formation of plans of action. If a large stock shipment, for example, is "in sight," the

traveling freight agent will be made cognizant of the fact, and with his knowledge, both general and special, of the company's affairs, he will solicit the shipment, presumably with special cogency and efficiency. If there be a "bunch" of tourists about ready to select their route to a given objective point, the traveling passenger agent will be able to assist very materially in securing patronage for the company at this particular station. The patronage having been secured, whether by individual or united effort, the agent will insist on proper service being rendered by his company, to make good the representations honestly and correctly made to patrons. He will, if necessary, use the wires to this end. He will, as it were, assume the standpoint of the shippers and see that their interests are fully and effectually represented. It is, indeed, probably true that the scope of the agent in this regard has been somewhat abridged in recent years. Appeals to shippers and for shippers must now be made according to legal requirements more than formerly was necessary; inducements in the form of free transportation or other sorts of special favors can no longer be freely granted or promised. But there is legitimate room yet for the activity of the solicitor. He may, for example, take an active part in assisting shippers to find markets for their goods, if they have goods to sell, or to find places at which to buy to the best advantage. The company's directory of industries and special resources along its lines may be called into requisition, and even special lists of dealers of various sorts be provided for the shipper's use. And what inducements are forbidden by law may, perhaps, be

compensated for by legitimate ones in the nature of services promised. But not to dwell longer upon the present topic, we pass now to the second above mentioned.

(2) If a station be located in competitive territory, the agent not only may but *must* exert himself positively and vigorously beyond the mere station precincts as well as within, if he expects or is to be able to get a reasonable share of business for his company. At a competitive point there are different lines, each *willing* at least to take all it can get irrespective of other lines. It is not always or often the case that the lines agree as a matter of course to share the business openly and equitably among themselves. Each agent feels called upon to see to it that his company is not outdone completely. This relation of competition renders it doubly necessary that the agent at a competitive point should be doubly well informed as to the capacities of his own line, and also that he should be well advised as to those of other lines. And not only this, he must be on the alert practically, so as to make the most of his own company's strength and take advantage, it may be, of the weakness of competing lines. If his line really merits business in greater degree than other lines he should not be too slow or indifferent to see that it secures the business so deserved; and a very little point may sometimes decide the matter. As an illustration, let it be supposed that of two competing lines carrying goods to and from the same commercial center one must, on account of the nature of its service, hold goods overnight in its freight house instead of being able to deliver them

directly to consignees; the other road, on the contrary, we will suppose, has a service permitting the delivery of goods before nightfall. If the agent of the latter named line discovers the fact and solicits patronage with reference to it, he acts legitimately and well. If the freight house in which goods must be held overnight be infested with rats, he would do well to make note of that fact too. But it is doubtless true that the spirit of competition may sometimes be allowed to go too far. The agent should exert his energies in the development of the natural advantages of his own station rather than in striving merely to counteract the influence of agents of competing lines. It would ordinarily be ridiculous and foolish for him actively to *solicit* passenger traffic for a point to which his own line may be a roundabout route while some other is direct. It would be absurd to ignore the fact that different lines possess different advantages in the matter of freight traffic, and to make a specialty of soliciting coal shipments, for example, when the really available coal mines are located on some other line than that represented by him. Much better would it be to turn attention to another class of business, having a positive claim to attention. In those kinds of business in which all lines have very nearly equal facilities, competition is naturally in order; but in other cases it is less suitable, and it should hardly be cultivated merely for its own sake. In one point an agent may sometimes make a mistake: he may fail to discover when competition or reason for it really exists. This would be likely to be the case when a competing station happens to be one not located at the same town, though in the

same vicinity, as a given station. An agent should, of course, have such knowledge of his environment as to be aware of such a circumstance, and should govern himself accordingly. This may necessitate an activity on his part taking him some distance away from the station proper. If business in sight is sufficient to warrant it, he may in such case find it necessary to ask for assistance from the central offices in the form of an approved expense account. If this is not granted, he may be justified in leaving all exertions to secure the business to be made by the traveling agents, or perhaps in altogether ignoring it after having duly advised the central office as to the kind and amount of business requiring to be looked after. The agent may have occasion to feel justified in repeatedly calling the attention of the central office to matters of this sort, and should so do when necessary.

(3) If the agent fully understands and fulfills the conditions of his position he will, most probably, find himself in certain specialized relations: there will be certain aspects of his environment with which he and his station will be especially identified; certain patrons or classes of patrons of his company with whom and for whom he will labor more than with or for others. Although legally he is not permitted to discriminate in favor of one individual to the manifest disadvantage of another, the natural division of interests and patronage among the various competing lines at his station will have resulted, among other things, in his being especially concerned with certain shippers or classes of shippers whom he must make special efforts to serve in the

interests of his company. These shippers he may rely upon for the major part of their business. With them he is in frequent conference as to the mutual interests of themselves and the company. By the information and advice which he affords them he strengthens them in their lines of business, and they thereby, in return, become sources of strength and support to the company's business. They grow from small dealers, say in feed, grain and hay, to extensive elevator owners; or they establish lumber yards and coal sheds along the company's tracks and give it their carload shipments of various classes of commodities. They are friends of the company and of the agent: and with good reason, for the agent and the company have been and are their friends. They prosper, and in so far the community in which they reside prospers, because, on the whole, the station has been managed in their interest as well as in that of the company, the two interests being correlative. And this brings us to our final standpoint.

CHAPTER XXIX

THE STATION IN ITS ORGANIC IDENTITY WITH ITS ENVIRONMENT

Station Identified with Interests of Community — Precondition of Railway Itself — But Railway Has an Identity Which Must be Inviolable to a Certain Extent for the Good of All Concerned.

A STATION through whose agent are realized, theoretically and actually, its possibilities in relation to its territory, generally and in a competitive regard, as above explained, comes to stand in truly organic relation to its surrounding territory, its environment. The agent desires to be, and is recognized to be, a real and beneficent force in the territory. While fully loyal to the company, he "runs" his station in the interest of the community as well as of the company. He is not disinclined nor afraid to ask from the company such services for the community as it merits; he takes positive satisfaction in so doing. And he is looked upon by the people of the territory not as an enemy, but rather as a friend; in fact, he is almost certain to have many personal friends and to occupy a good social position. If he is sincere, he will acknowledge this without striving too eagerly to make capital out of the relation that exists, for himself and his company; and he will merit respect on his own account as well as that of the company. He will be a self-respecting citizen, and not a mere menial servant, as it were, of the company. Recognizing, then,

the station in its organic identity with its environment, one sees confirmed, in its truth, a statement made at the beginning of this course of studies, to the effect that the station is not a mere resultant, but one of the preconditions of the railway itself. But this must not be taken too one-sidedly. While this is true in a sense, and, as a consequence, it is true, railways are public utilities; they have a justification of their own which must not be entirely forgotten even here. Railways cannot be public utilities if they are recklessly managed, whether in the name of the public or not. There are certain principles according to which alone they may be scientifically, safely and profitably conducted; and these principles have to be applied at the station as elsewhere on the line. The agent is necessarily called upon to observe firmly and consistently the regulations prescribed for the management of his office and to promote the legitimate interests and protect the undoubted rights of his company.

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